City and County of San Francisco
San Francisco City Planning Commission

Environmental Impact Report

90 New Montgomery

Draft
81.492E

Publication Date: May 21, 1982
Public Comment Period: May 21, 1982
through June 24, 1982
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Written Comments should be sent to the Environmental Review Officer, 450 McAllister Street, San Francisco, CA 94102

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I. SUMMARY

PROJECT DESCRIPTION

The proposed project is sponsored by Highfield Montgomery Corporation. The sponsor proposes to build a 15-story office building containing about 135,500 gross sq. ft. The street level would provide retail space and a loading dock to serve the project. Parking for 23 vehicles would be provided in the basement area, which contains about 11,500 gross sq. ft.

The project site, which contains approximately 9,800 sq. ft., is located at the northwest corner of the intersection of New Montgomery and Mission Sts., with frontages of approximately 80 ft. on New Montgomery St. and 120 ft. on Mission St. The site is bounded on the north by Aldrich Alley; it is currently used as a parking garage. The project would be located directly south of the Call Building and across Mission St. from the Rialto Building, both rated "A" in the Heritage survey of architecturally significant buildings in downtown San Francisco.

PROJECT EFFECTS

The project would require demolition of two levels of the existing parking garage on the site (ground level and second-story level); the basement parking level would be retained. The project would comply with the basic use, height, and bulk provisions of the City Planning Code and with the current moratorium on the use of floor area bonuses.

There are several architecturally significant buildings near the project site. According to the project architect, the exterior of the project structure has been designed to be compatible with the nearby buildings which have been rated in architectural surveys.

The project would cast new shadows on the Call Building, the Sheraton Palace Hotel including the Garden Court, and New Montgomery St. With the project, new shadows would advance and recede across the translucent glass roof of the Garden Court from late September to late March during early-morning hours; the effect on any given day would be barely noticeable.

At full occupancy, the project would create about 515 jobs. A demand for 110 housing units in San Francisco could be generated by the project. The project would require about 85 person-years of construction labor.

The project would generate directly about 215 Muni trips during the evening peak hour. Regional transit systems would have about 260 additional p.m.-peak-hour trips generated directly by the project. A demand for about 130 long-term parking spaces and 30 short-term spaces would be generated by the project. Access and egress to and from the basement-level parking would be provided via a one-lane ramp with the entrance from Aldrich Alley. Vans and service vehicles would reach the (Aldrich Alley) loading dock via a right-turn from New Montgomery St. on to Aldrich Alley; for egress, trucks would drive to the west down Aldrich Alley, turn left at Annie St., then turn onto Mission St.

Other project-related impacts would be generally typical of most Downtown office projects. Noise effects would occur during construction, primarily from pile driving. Project construction and operation would result in increased energy consumption; the project would comply with Title 24 requirements. Geotechnic and seismic constraints that apply to the project would be resolved through implementation of engineering and design measures recommended by the project soils engineer.

CUMULATIVE EFFECTS OF DOWNTOWN DEVELOPMENT

The proposed project, together with other major downtown office buildings under construction or proposed, would add approximately 11 million gross sq. ft. to the 60 million sq. ft. of office space that now exists in the City. This individual and cumulative development would continue a trend of growth in service-sector and office headquarters activities in downtown San Francisco.

Cumulative parking demand would be greater than the available supply of spaces, eliminating the existing seven percent vacancy rate within 2,000 ft. of the project. Increases in demand for public transportation services would result in a spreading of the peak-of-the-peak ridership conditions on most carriers, with increased incidents of overloading most likely to occur on Muni, Golden Gate Transit buses, and BART transbay trains.

MAJOR MITIGATION MEASURES

Mitigation measures proposed as part of the project include the following:

- On January 27, 1982, the project sponsor, Highfield Holdings, Inc., and California Jones Company entered into an agreement with the City and County of San Francisco (signed by Dean L. Macris, Director of Planning) relating to office building housing requirements. Of the 377 housing credits awarded to Highfield from this agreement, they will apply 112 to meet the housing demand generated by this project as calculated using the DCP formula.

- Vehicle-activated signals would be installed at both ends of the garage ramp, to prevent head-on conflicts between inbound and outbound vehicles on the one-lane ramp and to warn pedestrians on the sidewalk of the approach of outbound vehicles.

- The curb-to-curb width of Aldrich Alley would be increased from 7.5 ft. to 10 ft. for the length of the site to facilitate access to the enclosed loading dock.

- The project sponsor would provide three parking spaces for bicycles, and one parking space for handicapped persons in order to decrease congestion caused by such persons (who may not have access to other modes of travel) searching for parking spaces.

- A transportation broker in the project management office would encourage transit use through the on-site sale of BART, Muni, and Golden Gate

Transit passes to employees, and by distributing transit information. The broker would provide a central clearinghouse for carpool information in cooperation with the non-profit RIDES for Bay Area commuters.

- The project would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and to reduce the number of service trips to the site. Storage space for recyclable waste material containers would be provided for office use.

ALTERNATIVES

The following alternatives to the proposed project are discussed in Section VII of this report:

A. The No-Project Alternative would continue the use of the existing parking garage.

B. The Mission St. Loading Dock Alternative would provide a loading dock with access from and egress to Mission St.

C. The Pass-through Loading Dock Alternative would provide a loading dock with access from Aldrich Alley and egress on Mission St.

D. The No-Parking Alternative would eliminate the 23-space parking garage in the basement level of the proposed project.

E. The Housing Alternative would be a mixed-use project providing on-site housing and office space.

F. The Guiding Downtown Development (GDD) Alternative would be a building designed to meet the criteria outlined in GDD, published in May 1981 by the Department of City Planning. The structure would provide maximum office space allowed without providing housing on the site. GDD's height/bulk proposed for the site is 500-S; the proposed FAR would be

12:1. Under this alternative, the building would be a 12-story office building, with ground level retail, similar to the proposed project.

G. The Historic Building Alternative would be a structure designed with a height and exterior building materials which are similar to those of the Call Building.

II. PROJECT DESCRIPTION

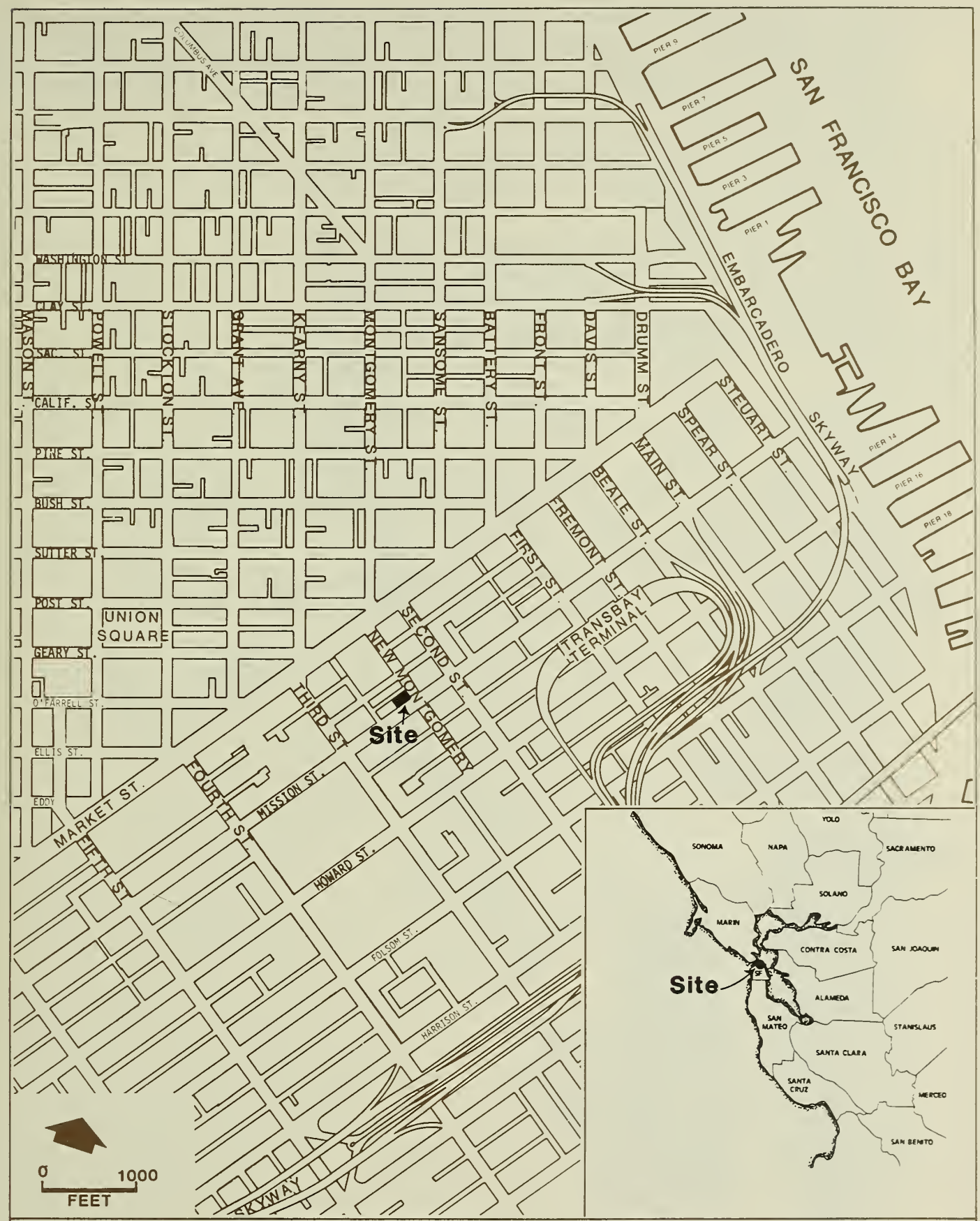
A. OBJECTIVES OF THE PROJECT SPONSOR

The project sponsor is Highfield Montgomery Corporation, a Canadian corporation based in Vancouver, British Columbia. The sponsor's objective is to obtain a return on capital invested in constructing and renting space in an office building in downtown San Francisco. The project is proposed at this time to help meet the market demand for office space in downtown San Francisco. The project architect is the firm of Gensler and Associates, San Francisco. Peter Gordon is project manager for the architect.

B. LOCATION OF THE PROPOSED PROJECT

The proposed 15-story office building would be located at the northwest corner of the intersection of New Montgomery and Mission Sts. (see Figures 1 and 2, pp. 7 and 8). The site is currently used as a three-level parking garage, including one basement level, and encompasses Lot 16 of Assessor's Block 3707 (see Figure 3, p. 9). It is in the C-3-O (Downtown Office) Use District and the 500-I Height and Bulk District; permitted floor area ratio (FAR) for the site is 14:1.

The site is an irregular rectangle with frontages of approximately 80 ft. on New Montgomery St. and 120 ft. on Mission St., and is approximately 9,800 sq. ft. in area. It is bounded on the north by Aldrich Alley. This passageway is 12 ft. wide, including a seven-ft.-wide roadway with 2.5-ft.-wide sidewalks on both sides. With project implementation, the passageway between the two buildings would be widened to about 14.5 ft. for the length of the site, including a ten-ft.-wide roadway and a two-ft.-wide sidewalk adjacent to the project.



SOURCE: Environmental Science Associates, Inc.

FIGURE 1: Project Location

Legend

Project Site

YBC Redevelopment Area

FIGURE 2: Project Site and Vicinity

SOURCE: Environmental Science Associates, Inc.

SOURCE: Environmental Science Associates

FIGURE 3: Existing Site From SE Corner, Mission and New Montgomery Streets

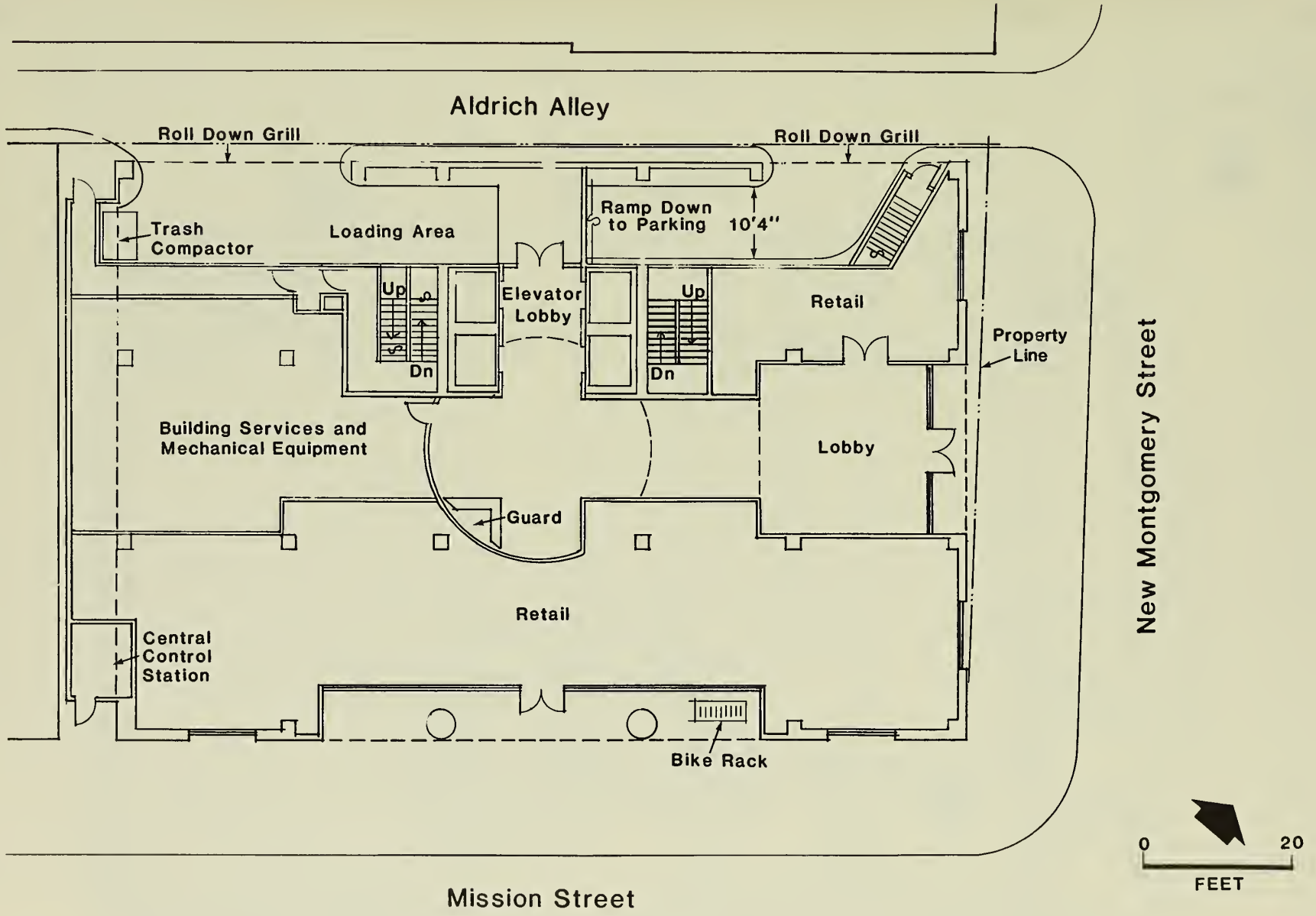
C. SITE AND BUILDING PLAN

The proposed 15-story building with street-level retail uses would be approximately 240 ft. tall including the mechanical penthouse; it would contain approximately 135,500 gross sq. ft. of floor area. In addition, the basement level would contain about 11,500 gross sq. ft. The ground floor would contain approximately 3,350 gross sq. ft. of retail space, the lobby providing access to offices on the upper floors, and an off-street loading dock (see Figure 4, p. 11).

One pedestrian entrance would be located along the New Montgomery frontage of the building to provide access to the building lobby and to the retail space in the eastern portion of the building at the ground floor level. A pedestrian entrance on Mission St. would provide access to the retail space located in the western portion of the ground floor of the building. Retail space would have clear glass windows along the sidewalk.

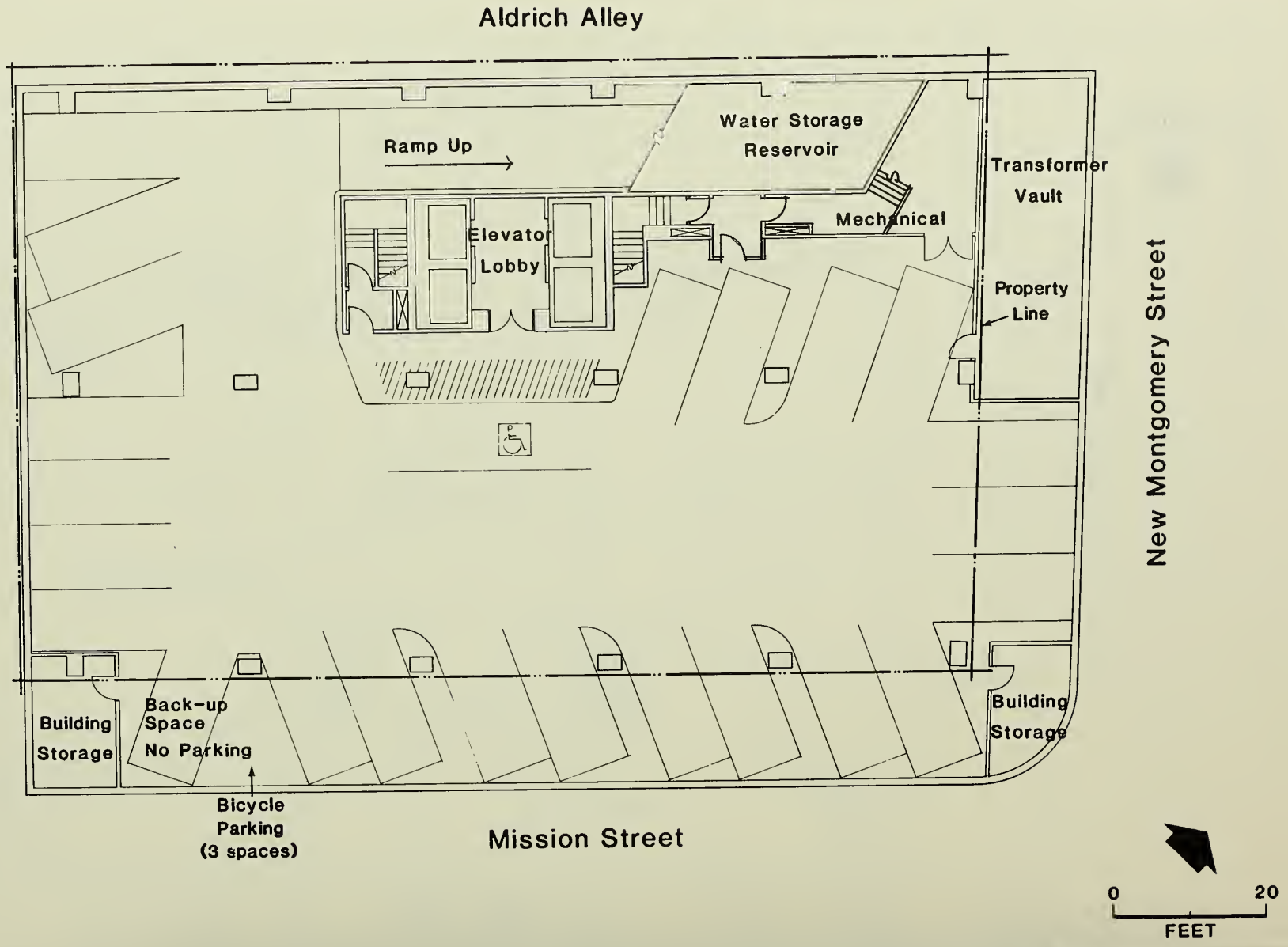
A loading dock would be provided with access from Aldrich Alley. Pursuant to discussions with the Department of Public Works, the alley would be widened along the project frontage to facilitate access to the dock. To unload, trucks would turn right from New Montgomery St. (which is one-way southbound) onto Aldrich Alley, drive about 150 ft. down the passageway, and back into the loading dock area. For egress, the trucks would continue westward down Aldrich Alley, turn left onto Annie St., and turn onto Mission St.

The basement would contain 10,100 sq. ft. of parking and driveway area and 1,400 sq. ft. of storage and mechanical equipment space (see Figure 5, p. 12). From New Montgomery St., cars would enter the parking garage in the basement via a one-lane ramp with access from Aldrich Alley, the one-lane street adjacent to the site on the north. When leaving the garage, cars would enter New Montgomery St. via the ramp and Aldrich Alley. There would be 23 parking spaces, including one oversized space designated for handicapped persons. Three bicycle parking spaces would also be provided. Parking space is currently provided in the existing basement including space under the public sidewalks along New Montgomery and Mission Sts.; this existing



SOURCE: Gensler and Associates

FIGURE 4: Ground Floor Plan



SOURCE: Gensler and Associates

FIGURE 5: Basement Plan

arrangement would be continued with the basement plan as proposed in the project. Vertical clearance in the garage and on the ramp would be 7 ft. 10 in.

Each of the upper 14 floors would contain about 8,900 gross sq. ft. for a total of 124,300 gross sq. ft. of office space (see Figure 6, p. 14).

The structure would be rectilinear in form (see Figures 7 and 8, pp. 15 and 16). The building exterior would consist of aluminum spandrel panels. Clear glass would be used on the first and second levels; grey-tinted glass would be used above the second level.

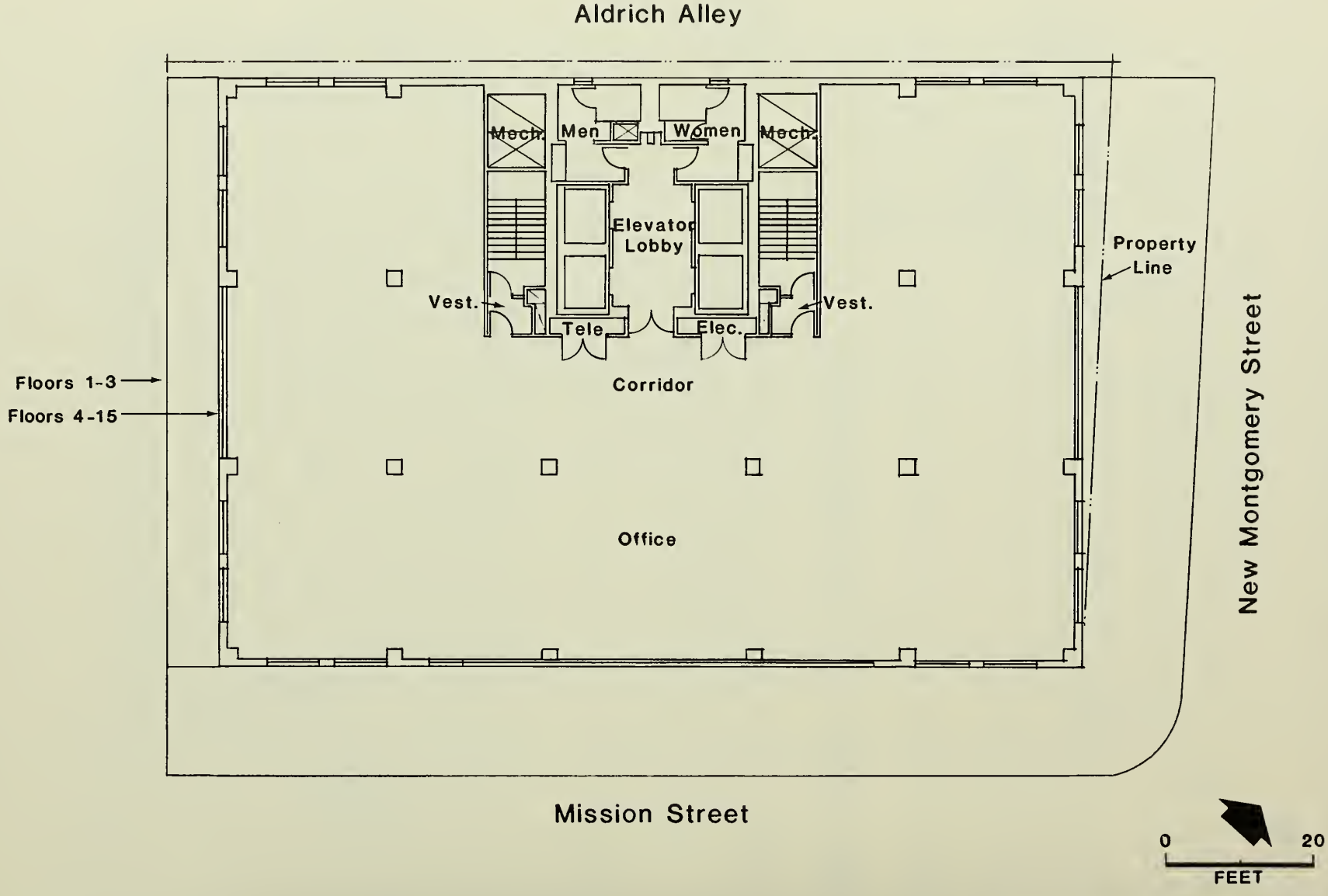
Approximately 515 people would be employed at the site.

D. PROJECT SCHEDULE, COST, AND REQUIRED APPROVALS

Environmental review and detailed project design are expected to be completed by the fall of 1982. Following permit approvals, project construction would begin. Initial occupancy is expected in early 1984.

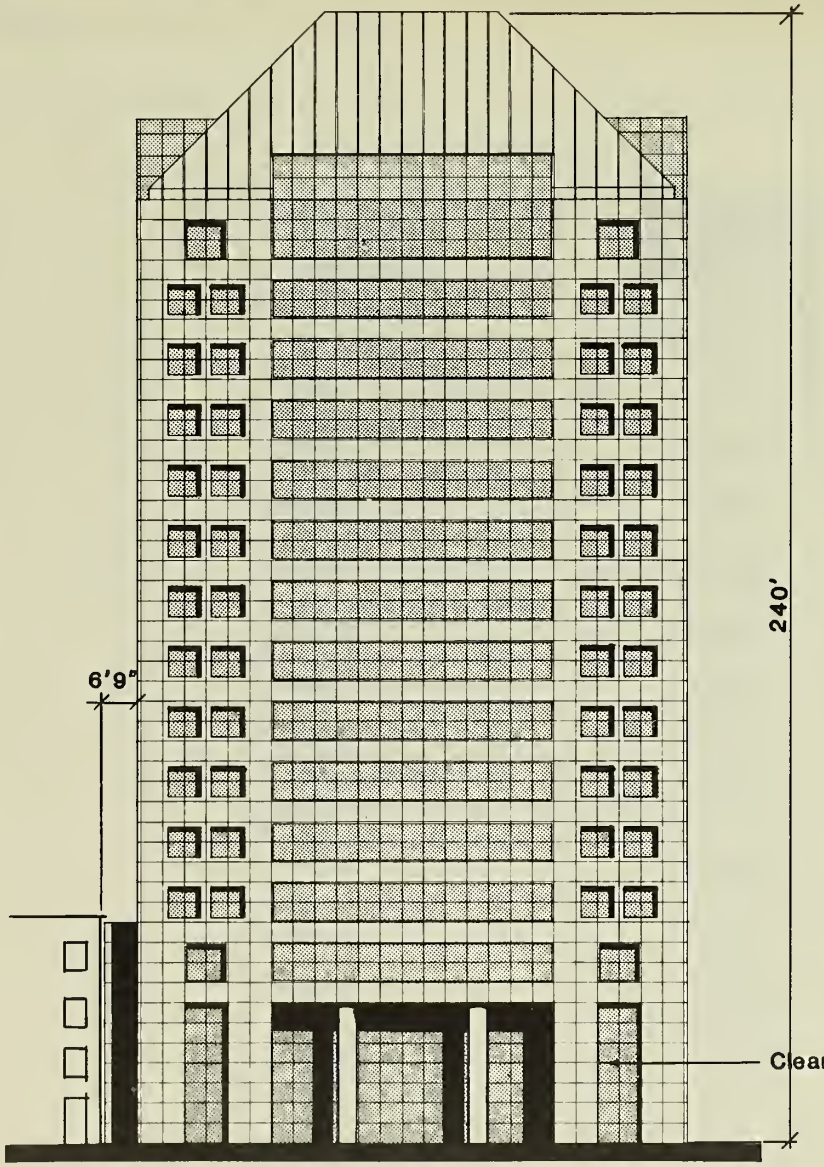
The project would have a fair market value of about $19 million (in 1982 dollars).

The project would comply with the provisions of the City Planning Code currently in effect and therefore requires no conditional use authorization and no variances to the Planning Code. Following certification of this EIR as adequate, accurate, and objective by the City Planning Commission, the project would be subject to review by the City Planning Commission in accordance with Resolution 8474, approved January 17, 1980, requiring discretionary review of all projects in the Downtown area. The project sponsor then would obtain a demolition permit from the Central Permit Bureau of the Department of Public Works, followed by a building permit or permits administratively approved for compliance with fire, electrical, building, and other pertinent City codes, and with conditions established by the City Planning Commission in its discretionary review.

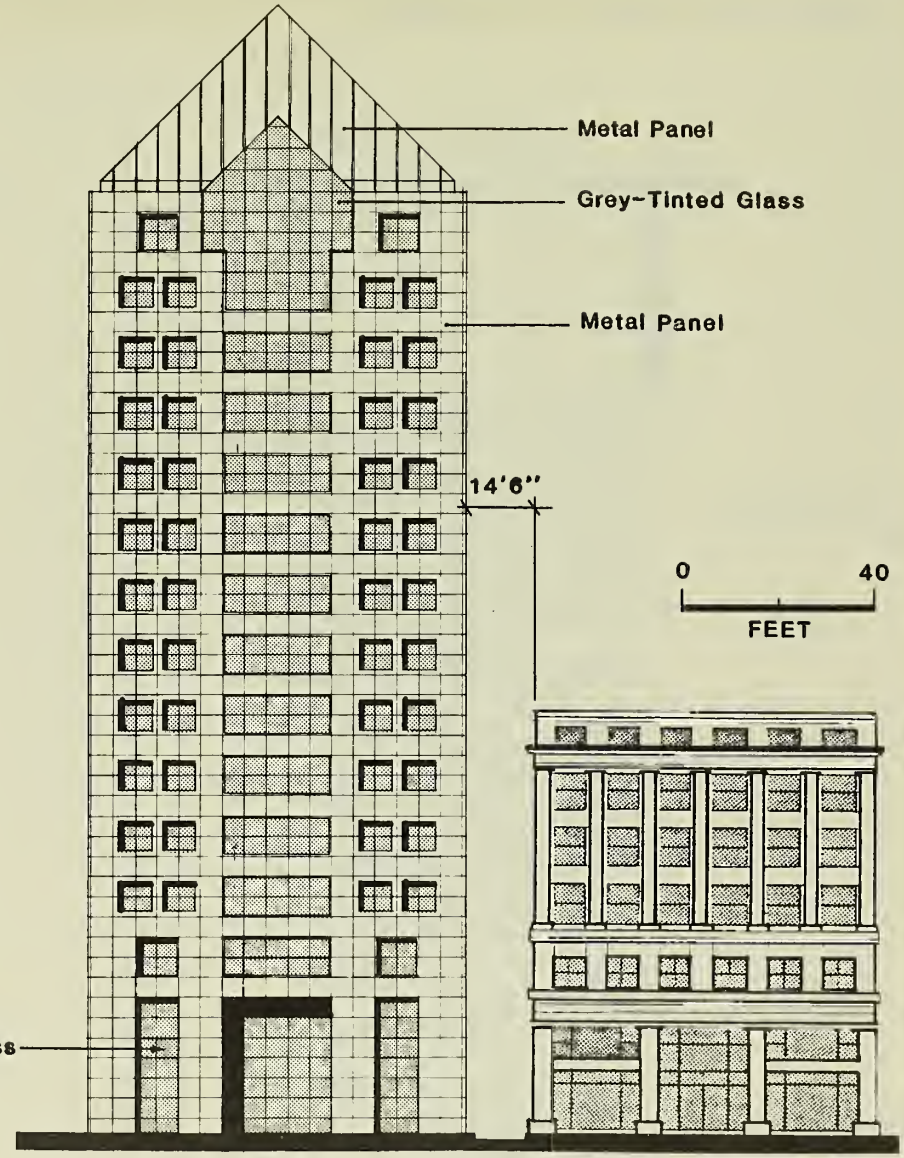


SOURCE: Gensler and Associates

FIGURE 6: Typical Floor Plan



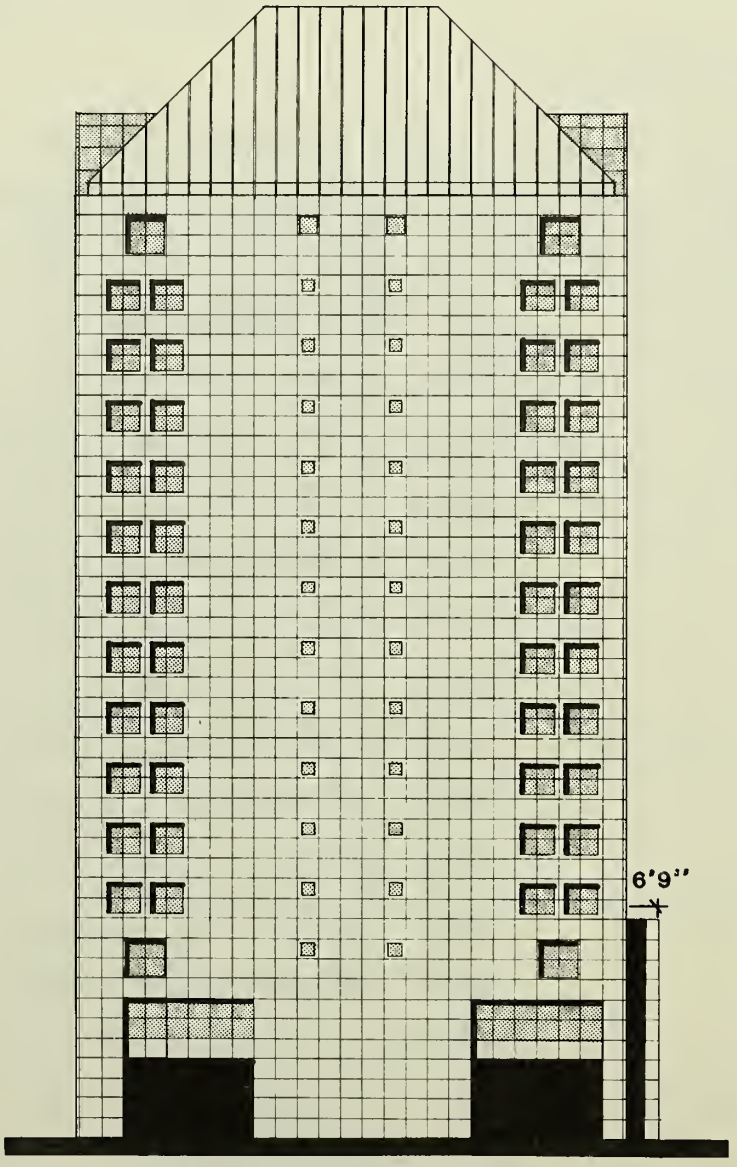
Mission Street Elevation



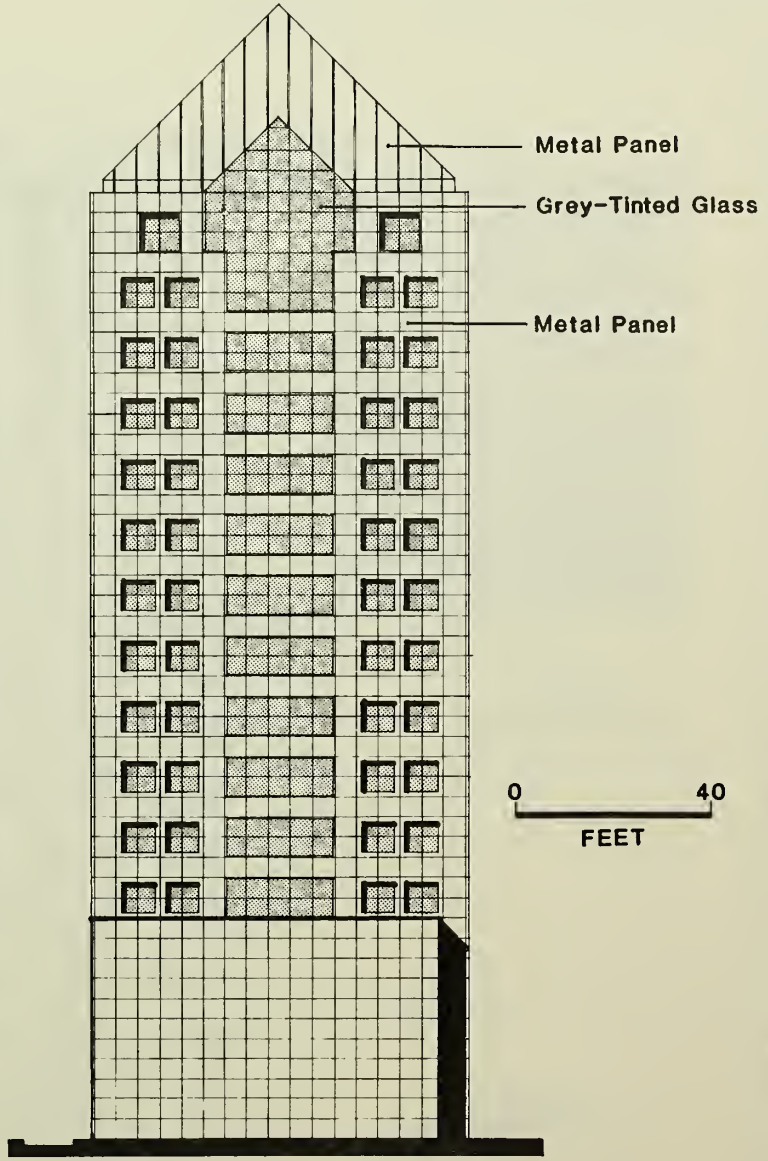
New Montgomery Street Elevation

SOURCE: Gensler and Associates

FIGURE 7: Project Elevations



Aldrich Alley Elevation



West Elevation

SOURCE: Gensler and Associates

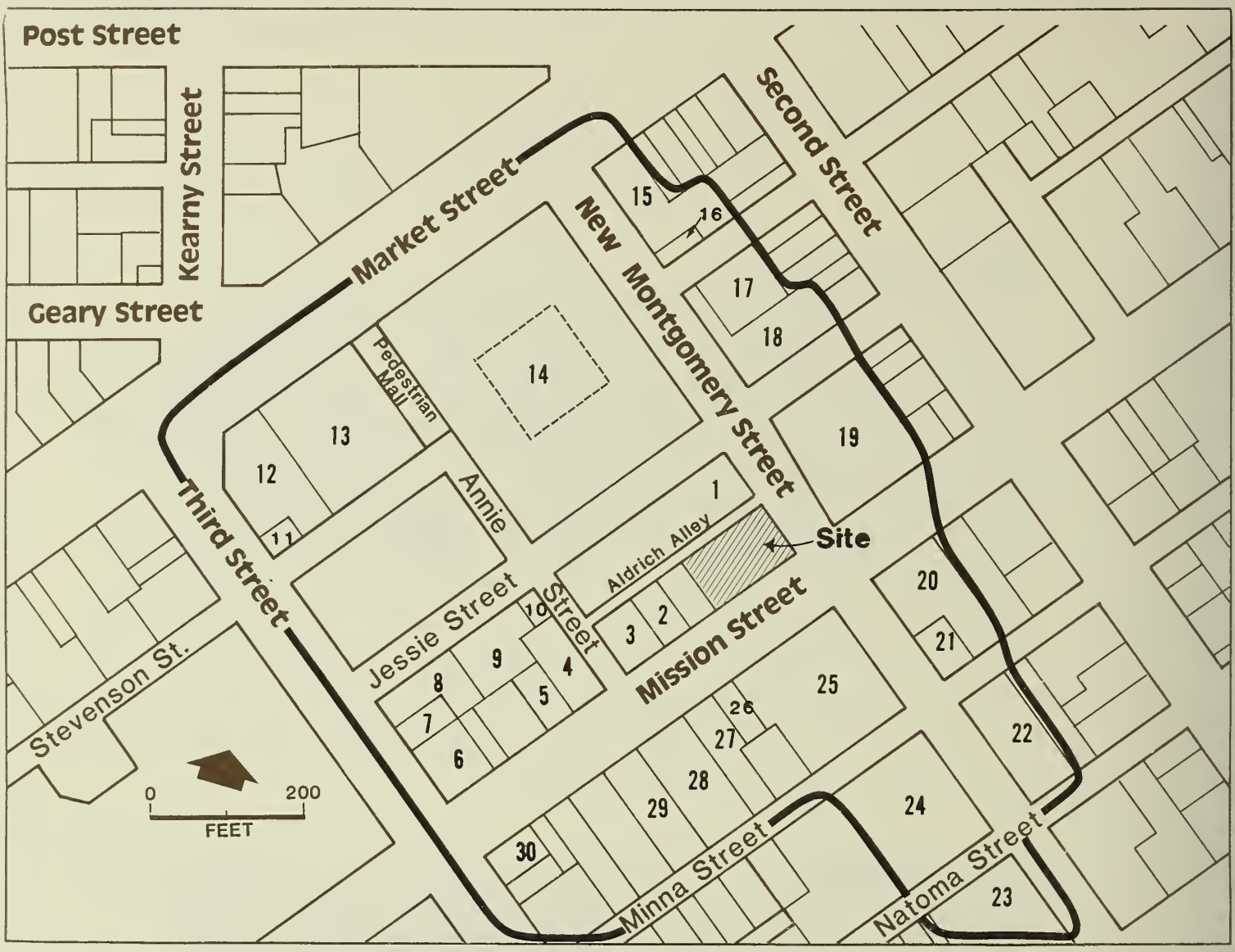
FIGURE 8: Project Elevations

III. ENVIRONMENTAL SETTING

A. URBAN DESIGN FACTORS

The project site is located south of Market St. in a block that is divided by a network of secondary streets and alleys into a series of "mini blocks." These streets, which were originally established to create small residential lots, break up the large block area, permitting increased pedestrian accessibility. Surrounding structures are mainly two- to nine-story buildings, built up to lot lines and of post-earthquake construction (between 1906 and 1925). Building materials consist primarily of steel frames and brick and stone masonry, with various ornamental features (such as elaborate terra cotta carvings) incorporated into the building facades to accent architectural elements such as entrances and cornices. The building size and massing in the area maintains a human scale that provides a streetscape setting with visual interest for the pedestrian.

There are no architecturally and/or historically significant buildings on the site. However, the project vicinity contains numerous buildings (see Figure 9, p. 18) that are included in the Department of City Planning Inventory of Architecturally Significant Buildings, and in the Survey for the Foundation for San Francisco's Architectural Heritage (see Appendix A, p. 118) for a description of the surveys and their rating systems). Structures of particular architectural significance are the A-rated Call Building, adjacent to the north of the site and the A-rated Rialto Building, across Mission St. directly south of the site. These buildings establish a visual linkage along New Montgomery St., repeating the architectural scale, pattern and textures of the New Montgomery St. setting. The Rialto Building has arched entryways, brick facade treatment and defined horizontal building lines which provide the pedestrian with scale-giving reference points. The balanced composition of the upper portion of the Call Building creates a sense of formality that is in keeping with buildings fronting on New Montgomery St., such as the Sharon, the Rialto, and the Crossley Buildings.



Legend

	Building	S.F. OCP Inventory*	Heritage Survey*
	On Site Block:		
1	74 New Montgomery, Call Bldg.**	3	A
2	652-654 Mission		C
3	658-664 Mission, Graphics Bldg.	3	C
4	666 Mission	1	C
5	674-676 Mission, Gallatin Bldg.	1	C
6	87-97 Third, Grace Bldg.		C
7	81-85 Third		C
8	71-77 Third, Breen's Fine Food**		B
9	167-179 Jessie, Hotel Jessie		C
10	163-165 Jessie, Hess Bldg.		C
11	17-29 Third		C
12	691-699 Market, Hearst Bldg.**	3	B
13	673-687 Market, Monadnock Bldg.**	3	B
14	633-665 Market, Sheraton Palace Hotel,** Garden Court	4 City Landmark	A
	Fronting on New Montgomery		
15	623-631 Market, Metropolis Trust and Savings Bank**		B
16	17-29 New Montgomery		C
17	111-127 Stevenson - Palace Garage**		B
18	39-63 New Montgomery, Sharon Bldg.**	4	A
19	79 New Montgomery, Crossley Bldg.		C
20	617-623 Mission, Koracorp Bldg.		C
21	111-121 New Montgomery, Standard Building		C
22	137-159 New Montgomery		C
23	170-180 New Montgomery, Furniture Exchange	4	C
24	134-140 New Montgomery, Pacific Telephone and Telegraph Co. Bldg.**	4	A
25	116 New Montgomery, Rialto Bldg.**	3	A
	Fronting on Mission		
26	641-643 Mission		C
27	647-649 Mission, Veronica Bldg.	1	C
28	657 Mission, McLaughlin Bldg.		C
29	663-671 Mission, Grant Bldg.		C
30	101-107 Third, Williams Bldg.**		B

*See Appendix A for discussion of surveys and ratings.
**Architecturally and/or Historically Significant Buildings in City Planning Commission Resolution No. 8600

Study Boundary

FIGURE 9: Architecturally Significant Buildings Near the Project Site

SOURCE: Environmental Science Associates, Inc.

The Rialto Building is located in the southwestern corner of the Mission/New Montgomery intersection. The C-rated Koracorp Building is located in the southeastern corner of the intersection and the C-rated Crossley Building is located in the northeastern corner. The architectural integrity of the project intersection is reinforced by the siting of these three buildings because of their similarity in height, massing and architectural style. The presence of the two-story parking structure on the project site weakens the visual cohesiveness of this intersection because of its small scale and dissimilar textures.

B. EMPLOYMENT, HOUSING, AND FISCAL FACTORS

LOCAL AND REGIONAL COMMERCIAL SPACE AND EMPLOYMENT

San Francisco is the major office center in the Bay Area, with approximately 57.3 million gross sq. ft. of office space./1/ Approximately 32.4 million gross sq. ft. were constructed between 1960 and 1981 (see Appendix B, Table B-1, p. 120) in downtown San Francisco. In the 1960s, the amount of office space constructed averaged about 1.1 million gross sq. ft. per year. During the 1970s office space was added at a rate of about 1.7 million gross sq. ft. per year. In the first two years of this decade (1980 and 1981) the average annual office space added was approximately 2.2 million gross sq. ft. An additional 5.6 million gross sq. ft. of office space will be added when buildings under construction (as of November 1981) are completed; another 3.1 million sq. ft. of office space has been approved but is not yet under construction. This indicates that the amount of office space in the downtown area has increased steadily in the past two decades and will likely continue to increase in the next several years.

The largest employment growth in the Bay Area from 1970 to 1978 occurred in the office sector, which accounted for over 60% of the regional increase in the total work force. A total of 1.2 million people in 1978 held office jobs in the Bay Area, with nearly 70% employed by firms serving the local population. Over 55% of the 280,000 office workers employed in San Francisco worked for employers such as national or regional headquarters which serve a wider geographical area./2/

In early 1981, annual rents in the newer downtown office buildings ranged from about $24 to $35 per sq. ft. Office space in the buildings that will go on the market in 1984 is expected to command annual rents of between $35 and $50 per sq. ft. In December, 1981, the vacancy rate in downtown office buildings was estimated to be 0.36% according to a real estate survey./3/ Low vacancy rates coupled with rapidly growing rents suggest that the supply of new office space in San Francisco has not kept pace with demand.

With the apparent shortage of office space in San Francisco as one influential factor, some potential users of San Francisco office space have located elsewhere. While the City houses 60% of the Bay Area office space, 56% of the new construction, based on building permit value, took place outside of the City from 1972 to 1979./4/ Cheaper space in outlying areas attracts companies that do not need a downtown San Francisco location or that can shift their support functions out of the City. For example, approximately 9 million sq. ft. of new office space is under construction or planned in the next ten years in major projects in San Mateo County. Office space construction in Contra Costa County is averaging one million sq. ft. a year. Additionally, over 10 million sq. ft. of office space is under construction or planned in the next ten years in Oakland./5/ Annual rents for new office space in these areas average from about $15 to $18 per sq. ft.

EMPLOYMENT AT THE PROJECT SITE

The parking garage now operating at the project site employs about ten persons. There are no other uses or businesses on the project site.

THE HOUSING MARKET

Both regional and San Francisco housing stock are characterized by low growth, low vacancy rates and high purchase and rental costs in relation to typical wages paid. These factors combined have tended to constrict the supply and affordability of housing in San Francisco.

FISCAL FACTORS

The market value of the property on the project site in 1981 was approximately $850,000./6/ At the fiscal year 1981-82 property tax rate of $1.19 per $100 of fair market valuation, the parcel generated about $10,150 in property tax revenues, distributed as shown in Table 1.

TABLE 1: DISTRIBUTION OF PROPERTY TAX REVENUES FROM THE PROJECT SITE FOR THE FISCAL YEAR 1981-82

Agency	Ad Valorem Tax Rate	Percent	Revenues*
City and County of San Francisco	$0.945	79.4	$8,060
S.F. Unified School District	0.142	11.9	1,208
S.F. Community College District	0.025	2.1	213
Bay Area Air Quality Management District	0.002	0.2	20
BART	0.076	6.4	650
TOTAL	$1.19	100.0	$10,151

* Based on the 1981-82 composite tax rate of $1.19 per $100 of fair market valuation.

SOURCE: San Francisco Controller's Office

Average annual earnings of the ten employees at the site in 1981 are estimated to be $10,000./7/ At the 1980-81 payroll rate of 1.5% of total earnings, present employment is estimated to generate about $1,500 in payroll taxes to the City.

Based on the present business on the site and the number of employees and wages paid, the revenue to the City and County of San Francisco from the parking tax, payroll tax, and property tax totaled about $55,000 in 1981.

The City incurs costs in serving the existing project site. Police, fire, and general government expenditures are supported primarily by the General Fund. Most street maintenance, street improvement, and traffic control costs are supported by other revenue such as fees, fines, and federal and state aid.

NOTES - Employment, Housing, and Fiscal Factors

/1/ San Francisco Department of City Planning, November 1981, "Major Office Building Construction and Conversion in San Francisco." See Table B-1, p. 120.

/2/ Association of Bay Area Governments (ABAG) and Bay Area Council, December, 1979, San Francisco Bay Area Economic Profile.

/3/ Coldwell Banker, "Office Survey Vacancy Index," December 28, 1981.

/4/ Association of Bay Area Governments (ABAG), April, 1981, Bay Area Office Growth, Working Papers on the Region's Economy, Number One.

/5/ Oakland Department of City Planning, January 26, 1982, "Major Buildings in the Central District."

/6/ Vernon Emmerson, San Francisco Assessor's Office, telephone conversation, January 21, 1982.

/7/ Former parking lot attendant (E. Araujo, April 16, 1982) stated that San Francisco parking attendants receive relatively low wages ($3.50 to $4.00 per hour). This would be $7,280 to $8,320 per year for a full-time employee. An average of $10,000 per year per full-time employee was used because managerial personnel would be paid higher wages, about $5.00 to $8.00 per hour. This would amount to $10,400 to $16,640 per year.

C. TRANSPORTATION

PUBLIC TRANSIT

Within a distance of 2,000 ft. of the site are about 30 Muni lines, carrying approximately 30,000 passengers into and out of the downtown area during the peak hours of the morning and evening commute periods. Peak loading differs among these routes; on some routes there are few standees, whereas on others the aisle space is jammed. Photographs of typical crowded peak-hour conditions are shown in Figure C-1, Appendix C, p. 123. They were selected from more than 100 photographs taken on various Muni routes at heavy load points selected with advice from the Muni Planning Division, during the

morning and afternoon peak-hours. Appendix C, Table C-2, p. 124, shows conditions on lines passing within walking distance of the site.

Muni Metro and BART subway lines may be boarded at the nearby Montgomery Station on Market St. The Transbay Terminal (AC Transit), is about 1500 ft. east of the site. SamTrans has stops along Mission St. and Golden Gate Transit has stops along Howard and Folsom Sts. near the site.

PEDESTRIANS

Sidewalks by the site on Mission and New Montgomery Sts. are 15 ft. wide (12 ft. effective width). During the p.m. peak hour, the New Montgomery St. sidewalk carries about 600 pedestrians and operates in an unimpeded condition. Only about 100 pedestrians walk past the site on the Mission St. sidewalk during the p.m. peak-hour. Each of the crosswalks across Mission St. at New Montgomery St. receive greater use during the peak hour, by about 1,000 pedestrians per hour. Platoons of pedestrians entering these crosswalks use about half of the time available to them to leave the curb. As the last person to leave the reservoir space does so about halfway through the New Montgomery St. green signal, these crosswalks function at about 50% of capacity./1/

The "sidewalks" on Aldrich Alley are 2.5 ft. wide. The alley terminates at Annie St. and is seldom used by pedestrians, who more commonly use Jessie or Mission St. sidewalks.

VEHICULAR TRAFFIC

New Montgomery St. is one-way, southbound, with three lanes in its approach to Mission St. The curb lane is designated as a right-turn lane, so that parking at curbside is prohibited by a red zone all along the New Montgomery St. side of the site. About 200 vehicles make this right-turn movement during the p.m. peak hour./2/ Pedestrians encountered in the west crosswalk across Mission St. delay this movement somewhat, so that vehicles are lined up in the curb lane all along the site at some time during most of the peak-hour signal cycles.

Mission St. has one traffic lane and one "diamond" (transit and right-turn only) lane in each direction. The curb lanes are tow-away zones during the pertinent peak hours. Along the Mission St. frontage of the site, there are two curb cuts providing access to the existing garage on the site, and one metered parking space. There are about 100 buses per hour on Mission St. during the a.m. and p.m. peak hour. Overall operating conditions at the intersections of Mission and New Montgomery Sts. may be described as Level of Service C (see Table C-3, p. 125), with most vehicles not delayed by more than one signal cycle.

PARKING

Two recent analyses and surveys of parking availability in the vicinity of the site have found that vacancies in offstreet parking spaces average about seven percent with most of the vacancies occurring more than 1,000 ft. south of Mission St./3/ There are roughly 10,000 spaces within 2,000 ft. of the site, so that fewer than 1,000 spaces remain available on a given weekday.

There is one metered space at curbside along the site frontage on Mission St. which is in a tow-away zone during a.m. and p.m. peak hours. The remaining curbside space is a designated red zone, except for four curb cuts serving the parking garage on-site. This three-level garage parks about 100 vehicles.

NOTES - Transportation

/1/ From observations made between 4:30 and 5:30 p.m. on Monday, January 11, 1982, by the consultant, Environmental Science Associates.

/2/ P.M. peak-hour (4:30 - 5:30) vehicle counts were taken by the Department of Public Works on Wednesday, January 13, 1981. Southbound counts for left-, through, and right-turn movements were 136, 576, and 212, respectively. Left-, through, and right-turn counts were 0, 625, 173, respectively, for the eastbound approach and 49 (buses), 668, 0, respectively, for the westbound approach.

/3/ Parking surveys published in the 135 Main Building FEIR, certified March 25, 1982, and the Five Fremont Center FEIR, certified March 12, 1981, were conducted in areas including and east of the site, during July 1980 and July 1981. The Yerba Buena Center Second Supplement DEIR, estimated date of publication, May 27, 1982, describes parking availability in the area west of the site. Parking surveys in the YBC area were updated in November, 1980 and January, 1981.

D. AIR QUALITY

The nine-county San Francisco Bay air basin is designated by the California Air Resources Board (CARB) as a nonattainment area for ozone (O3, or photochemical oxidant) and carbon monoxide (CO); San Francisco is also a nonattainment area for total suspended particulate (TSP). Nonattainment means that the federal ambient air quality standards for these pollutants have been exceeded within the past two to three years. As required by the federal Clean Air Act Amendments of 1977, a regional Air Quality Plan/1/ has been adopted which establishes control strategies (stationary and mobile source emission controls and transportation improvements) to attain the standards for these pollutants by 1987. The Bay Area Air Quality Management District (BAAQMD), Metropolitan Transportation Commission (MTC), and CARB have primary responsibility for implementation of these strategies.

Ozone is not emitted directly but is a secondary pollutant formed in the atmosphere by a complex series of photochemical reactions involving emitted hydrocarbons (HC) and nitrogen oxides (NOx). Production and accumulation of significant ozone concentrations requires about one to three hours in strong sunlight in a stable atmosphere, where mixing and diffusion is at a minimum. Ozone air pollution is thus a regional phenomenon because the precursor pollutants are carried downwind before the reaction process is complete. In contrast, CO and TSP concentrations reflect local emission sources; concentrations are highest at the source and decrease as the pollutants are dispersed by wind.

San Francisco's air quality, in general, is the least degraded of all the developed portions of the Bay Area. Because of the prevailing westerly and northwesterly winds, San Francisco is more a generator of its own air quality problems (especially CO and TSP) and a contributor to those in other parts of the Bay Area (especially ozone), than a recipient of pollutants from elsewhere.

The BAAQMD now operates an air quality monitoring station approximately 2.3 miles to the south of the site at 900 23rd St; prior to 1980, the monitoring station was located at 939 Ellis St. A three-year summary of the data collected at the stations and the corresponding ambient air quality

standards are shown in Appendix D, p. 129. These data show occasional excesses of the most stringent ozone, CO, TSP, and nitrogen dioxide standards.

Highest annual pollutant concentrations in San Francisco, while exhibiting fluctuations due to variations in meteorology, have shown an overall improvement during the 1971-1980 period. No similar trend in the annual number of standard excesses is evident; however, such excesses are infrequent.

Motor vehicles are the largest source of CO, HC, and NOx in San Francisco, while paved street travel and power plant fuel combustion are the largest sources of TSP and sulfur oxides (SOx), respectively./2/

NOTES - Air Quality

/1/ Association of Bay Area Governments (ABAG), BAAQMD, and Metropolitan Transportation Commission, January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area Environmental Management Plan.

/2/ California Air Resources Board (CARB), 1979, Emission Inventory 1976.

E. GEOLOGY, SEISMOLOGY, AND HYDROLOGY /1/

TOPOGRAPHY

The site is located on generally flat land about 3400 ft. southwest of San Francisco Bay (see Figure 1, p. 7) and about 13 to 15 ft. above the San Francisco Datum (which lies 8.6 ft. above mean sea level). Higher land is located to the northwest at Nob Hill, to the north at Telegraph Hill, and to the southeast at Rincon Hill.

GEOLOGY

The site is located over the ancient Yerba Buena Canyon, which underlies the downtown area with its centerline almost directly beneath Mission St. The canyon was eroded in Franciscan bedrock during the Pleistocene Epoch (ten thousand to two million years ago) and subsequently filled with marine and alluvial deposits. Sea level fluctuation during the canyon filling has

resulted in interlayering of marine deposits with fresh-water and wind-blown deposits. More recently, man-made fill consisting of sand and debris has been placed on top of the natural fill. Probable arrangement of the sediments is shown in Appendix E, p. 131.

Man-made fill deposits are not suitable for a foundation base because of their tendency towards densification under earthquake shaking. All large buildings in the locality are supported by piles, driven into the dense clay and sand layers, which are capable of bearing heavy loads.

SEISMOLOGY

No active faults/2/ are known to be located within San Francisco; however several affect it. These include the San Andreas Fault, approximately nine miles southwest of the site; the Hayward Fault, about ten miles east of the site; and the Calaveras Fault, about 30 miles east of the site. All of these faults have a recent history of major and minor movements; large earthquakes can be expected in this region in the future. Within approximately the next 125 years (estimates of the recurrence interval vary)/3/ at least one severe earthquake of the magnitude of the 1906 San Francisco earthquake (about 8.3 on the Richter magnitude scale, a logarithmic scale measuring earthquake magnitude on the basis of energy released), and several moderate earthquakes comparable to the 1957 Daly City earthquake (Richter 5.3) can be expected to affect the proposed structure.

Potential seismic hazards include "strong" ground shaking, causing cracks in masonry and brick work, and subsidence of fill material./3/ No liquefaction,/4/ compaction, or internal disintegration of the natural soils is expected; the project area will not be affected by either the 100- or 500-year tsunami runups./5/

HYDROLOGY

No water bodies, springs, or water courses are located on or near the project site. The site is a relatively low-lying area which, under natural conditions, would receive runoff from areas to the north and west. Surface

runoff is nearly 100% because of the impervious nature of the site. It is discharged into a combined sanitary sewer and storm drain system which is designed to handle the 5-yr. storm./6/ Runoff from large storms is carried through the streets. In addition, due to insufficient sewage treatment capacity at the North Point Water Pollution Control Plant, stormwater runoff causes an average of 80 overflows of wastewater per year into the Bay. Improvements to the wastewater system to reduce overflows for the area of eastern San Francisco, bounded by Jackson St. on the north and Islais Creek on the south, to a maximum of ten per year are currently under design and construction./7/

The groundwater table near the site is at about elevation -2 feet San Francisco City Datum, which corresponds to about 15 to 17 ft. below the ground surface.

NOTES - Geology, Seismology, and Hydrology

/1/ This section is based in large part on data provided by the project geotechnical consultant in: Lee and Praszker, Geotechnical and Foundation Engineers, 1982, Preliminary Geotechnical Investigation, Proposed New Montgomery Street Office Building, San Francisco, California

/2/ Active faults are those having an historic record of activity or showing other geophysical evidence of movement within approximately the last 10,000 years.

/3/ Jim Dietrich, Earthquake Prediction Program Director, U.S. Geological Survey, telephone conversation, May 3, 1982.

/4/ Liquefaction is the transformation of granular material, such as loose wet sand, into a fluid state, such as quicksand.

/5/ Garcia, A.W. and J.R. Houston, 1975, Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound, Technical Report H-75-17, Hydraulics Laboratory, U.S. Army Engineer Waterways Experiments Station, P.O. Box 631, Vicksburg, Mississippi 39180.

/6/ The 5-year storm is the maximum storm which would be expected to occur in a particular area about once in five years. More specifically, it has a 20% probability of occurring once in any given year; it may occur several times in one year and not again for another 10 to 15 years.

/7/ Don Hayashi, Director, Citizen Participation, San Francisco Clean Water Program, telephone conversation, April 13, 1982.

IV. ENVIRONMENTAL IMPACT

The Initial Study for this project, which was published on January 29, 1982, identified environmental effects of the project which would be either insignificant or mitigated through measures included in the project design (see Appendix H, p. 134). These are summarized below and not discussed further in this EIR.

POTENTIAL ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

Land Use Compatibility: The project would be consistent with land uses in the vicinity of the site and in the C-3-O district. The project would provide 14 floors of office space with retail uses on the ground level. Most of the surrounding land uses on New Montgomery St. are office with some retail; uses along Mission St. are primarily retail.

Noise: After completion, project operation would not perceptibly increase noise levels in the project vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance and noise insulation measures contained in the Noise Guidelines of the San Francisco Comprehensive Plan.

Construction Effects on Air Quality: Construction activities would not increase the frequency of violations of air quality standards. Mitigation measures would reduce temporary particulate emissions during construction.

Wind: The project does not appear to have the potential to create ground-level wind impacts which would cause pedestrian discomfort. Aldrich Alley is so narrow that aerodynamically, with northwest winds, the Call Building and the project would act as one structure, and wind accelerations would occur above ground level along the narrow eastern and western faces of the building. Pedestrian areas adjacent to the building along Mission St. would experience generally lighter winds due to the shelter offered by the building.

Utilities and Public Services: Increased demand for public services and utilities attributable to the project would not require additional personnel or equipment.

Biology: The project would have no direct effect on plant or animal life as the site is totally occupied by a structure.

Hazards: Project operation would not increase the risk of explosion or release of hazardous substances, in the event of an accident, or cause other dangers to public health and safety.

Other issues required by the California Environmental Quality Act to be included in an EIR are discussed below.

A. URBAN DESIGN FACTORS AND SHADOWS

The proposed project is a 15-story, 240-ft. high office building. The structure would be rectilinear in form with a 1:1 pitch roof that would include glass dormers on the east and west sides of the structure. It would be built out to the property line along Mission St. and set back from the property lines along Aldrich Alley and New Montgomery St. (see Figure 7, p. 15). The building facade would consist of a balanced composition of horizontal and vertical elements. Surface materials would consist of modular metal panels which are intended to give scale to the building facades. Grey-tinted glass would be used above the second level, with clear glass at the first and second levels. Window glazing would repeat the modular effect of the metal panels. The color of the exterior materials would be selected to be compatible with the neighboring buildings.

The main entrance to the building lobby would be on New Montgomery St. (see Figure 4, p. 11), with a side service entrance located on Aldrich (the north side of the building). Access to the ground floor retail spaces would be provided by an entrance on Mission St. A bicycle rack would be installed near the Mission St. entrance.

COMPATIBILITY WITH THE URBAN DESIGN ELEMENT OF THE COMPREHENSIVE PLAN

The Urban Design Element of the San Francisco Comprehensive Plan provides a basis in City policy for the following summary of the urban design implications of the proposed project (see Table 2).

TABLE 2: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN* AND THE PROPOSED PROJECT

APPLICABLE URBAN DESIGN POLICIES	RELATIONSHIP OF PROJECT TO APPLICABLE POLICIES
A. Policies for City Pattern	
1. Policy 3 - "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)	The project would join a number of other comparably sized relatively recent highrise buildings in the downtown area. Collectively, these buildings provide the major visual identification for the central business district. The project would be visible, but not prominent, in views of the skyline, and together with other South of Market St. highrise structures, would define the southern edge of the Financial District (see Figure 10, p. 33). See also Item C-3, p. 32.
B. Policies for Conservation	
2. Policy 6 - "Respect the character of older development nearby in the design of new buildings." (p. 25)	The project would represent a departure in scale from nearby older development (see Figure 11, p. 34). However, the project design would complement that of the adjacent Call Building. Horizontal lines at the third level of the project would line up with the horizontal band of the Call Building and the central entrance would repeat the central entrance design of the Call Building. The horizontal lines of the building base would reflect horizontal bands in nearby older development. See also Item C-3, p. 32.

TABLE 2: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN* AND THE PROPOSED PROJECT (Continued)

C. Policies for Major New Development	
3. Policy 1 - "Promote harmony in the visual relationships and transitions between newer and older buildings." (p. 36)	See Items A-1 and B-2, p. 31. The facade pattern of the project would combine large and small scale elements and offer a balanced composition of vertical and horizontal elements, in keeping with facade articulation of nearby older buildings.
4. Policy 2 - "Avoid extreme contrast in color, shape, and other characteristics which will cause buildings to stand out in excess of their public importance." (p. 36)	The project would be rectilinear in form; the top of the building would be sculptured. The glass would be tinted grey and the metal panels would be of light to medium values. These values would change depending on time of day, dampness, natural lighting conditions and reflected sky colors. In the context of nearby box-like highrise structures, the project would appear distinctive, but not "extreme" in the meaning of the policy.
5. Policy 5 - "Relate the heights of buildings to important attributes of the City pattern and to the height and character of existing development." (p. 36)	See Item A-1, p. 31. The project would be taller than neighboring low-rise and mid-rise development (see Figure 12, p. 35). At 240 ft., the project would be the highest building on New Montgomery St. between Mission and Market Sts.
6. Policy 6 - "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37)	The bulk of the project would be similar in scale and massing to nearby new development. The base of the building would include nine-ft.-wide recessed windows on the New Montgomery St. ground level which would provide the pedestrian with some sense of scale. The facade articulation would reflect a base, mid-section and top, in keeping with the two- and three-part compositions of nearby older buildings.

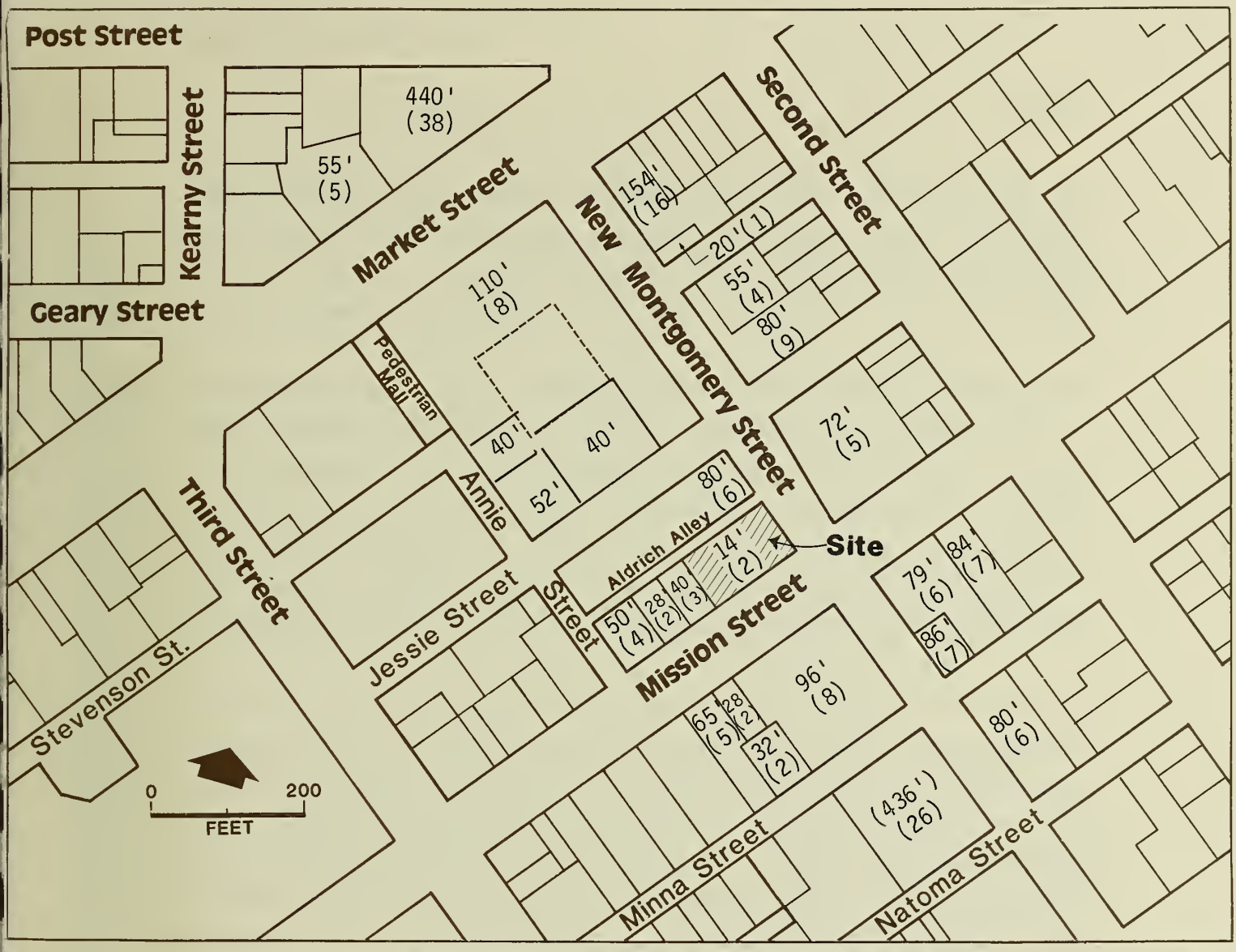
*Department of City Planning, 1971, Urban Design Element of the Comprehensive (Master) Plan. Page references are shown in parentheses.

SOURCE: Gensler and Associates

FIGURE 10: Outline of Proposed Project Looking Northeast from Moscone Center on Howard Street between Third and Fourth Streets

FIGURE 11: View of Project Looking North on New Montgomery Street

SOURCE: Environmental Science Associates, Inc.



Legend

Building Heights in Feet

(00) Numbers in Parentheses Indicate Stories

Project: 240'
(15)

FIGURE 12: Building Heights Near the Project Site

SOURCE: Environmental Science Associates, Inc.

SHADOWS

The project would increase the amount of shadow cast on the buildings northwest of the project site (the Call building and the Sheraton Palace Hotel) and on New Montgomery St. Pages 36 through 39i) show the extent of new shadow cast by the project in comparison with existing shadow in the project area. The months of the year selected for shadow analysis are September through March, beginning and ending with dates which correspond to the spring and fall equinox, respectively, when day and night are of equal length; the analysis includes December, when days are the shortest and shadows are longest. The months of April through August (including June which represents the longest period of daylight, when shadows are the shortest of the year) were not included in the analysis because shadows cast by the project during these months do not affect the Garden Court of the Sheraton Palace Hotel.

The Garden Court has a roof of translucent glass which allows diffused and reflected sunlight to illuminate the area; in addition, the chandeliers in the court interior provide illumination. The effect of shadowing is not as severe as it would be if interior illumination (and warmth) depended on direct sunlighting to the court. It is likely that total interior illumination in the Garden Court would be greater on a sunny day with almost total shadows, than it would be on an overcast or foggy day.

During early morning hours, the Garden Court is partially shaded by the east wing of the Sheraton Palace Hotel for most of the year, and partially shaded by the Call Building from November 22nd to January 21st, when shadows are longest. The project would cast new shadows on the roof of the Garden Court from late September to late March during mid-morning hours. New shadows cast by the project would advance and recede, lasting from about ten minutes to a maximum of about two hours.

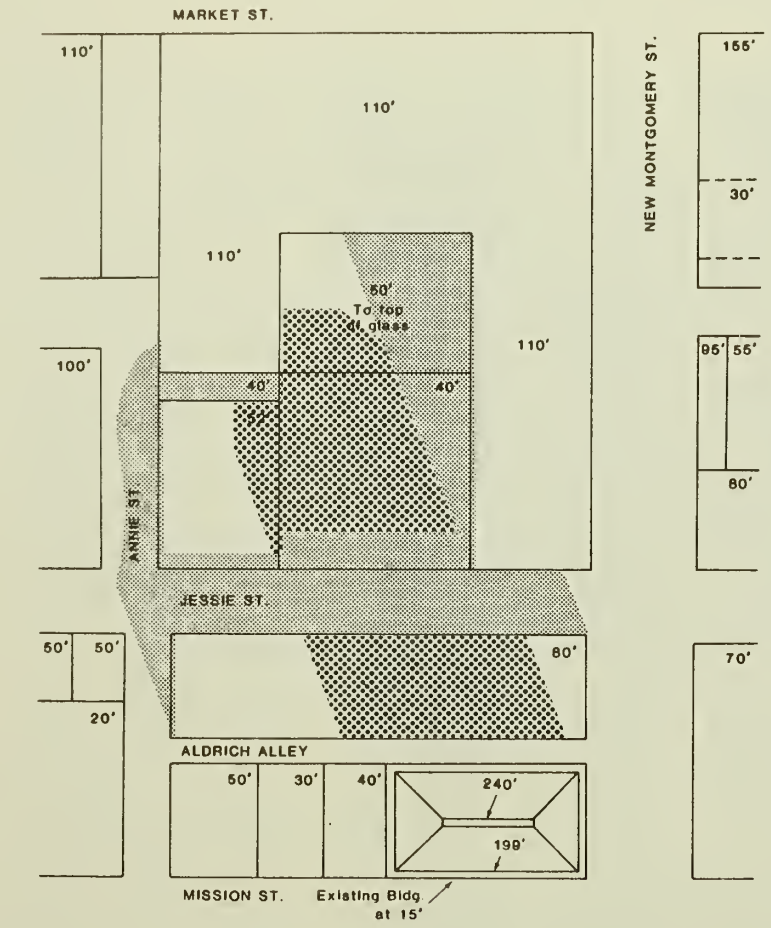
On September 24th and March 21st, the Garden Court would be shadowed by the hotel itself at 7:30 a.m. New shadows would be cast between about 8 a.m. and 9 a.m. (9 a.m. and 10 a.m. Daylight Savings Time (DST)) with maximum extent of the new shadows covering about 25% of the Garden Court roof at 8:30 a.m. (9:30 a.m. DST) (see Figures 13a and 13b, pp. 38 and 39). At the same time,

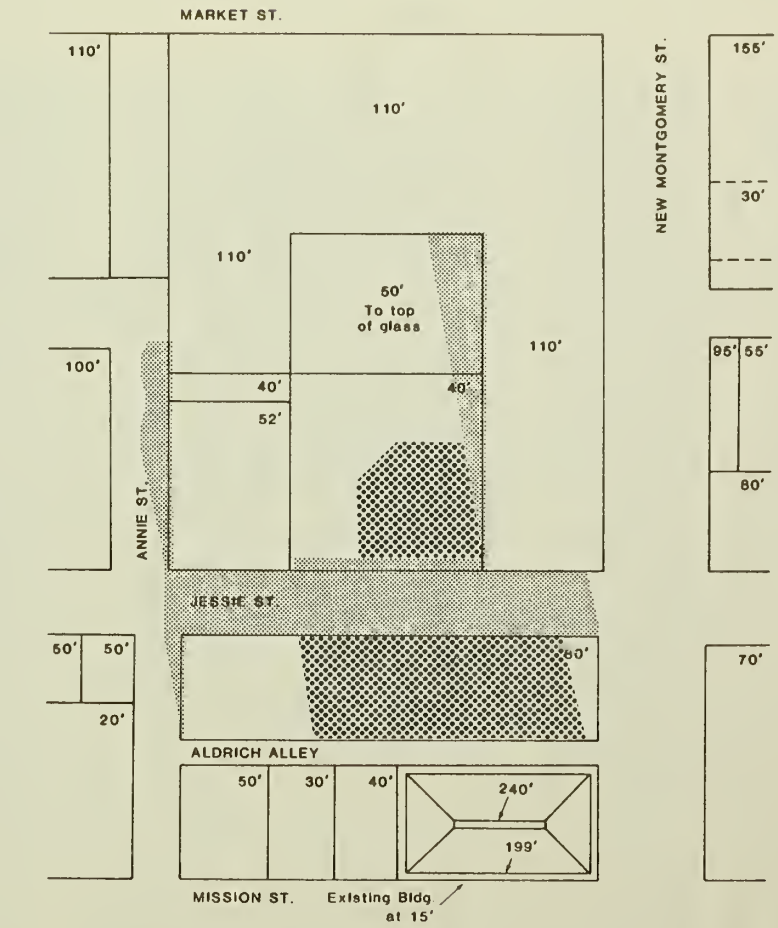
the hotel itself would be shading about 60% of the Garden Court roof. On October 6th and March 8th (see Figures 14a and 14b, pp. 40 and 41), new shadows would be cast between 7 a.m. and 9:30 a.m. (8 a.m. and 10:30 a.m. DST) with maximum extent of the new shadows covering about 50% of the Garden Court roof at 8:15 a.m. (9:15 a.m. DST) (see Figure 14a). The hotel itself would be shading the other half of the roof.

Maximum shading from the project on the Garden Court roof would occur from late October to late November in the fall and from late January to late February in the winter. New shadows would last from about 7:30 a.m. to about 10 a.m. (see Figures 15, 16, and 17, pp. 42 - 47). The hotel and the Call Building shade 100% of the glass roof at 7:00 a.m. The project shadow would advance and shade a maximum of about 70% at 8:45 a.m. on October 20th and February 23rd with the hotel itself shading about 25% (see Figure 15a, p. 42), and receding to less than 10% by 9:45 a.m. (see Figure 15b, p. 43).

On December 22nd at 8 a.m., the Garden Court would be in total shadow cast by the Call Building and the hotel itself (see Figure 18a, p. 48). The proposed project would thus add no new shadow at that time. The project would cast new shadows on the roof for about one hour, shading a maximum of 50% of the Garden Court at 8:30 a.m. and receding off the roof by about 9:30 a.m. By 10 a.m. the shadow would have moved in a northeasterly direction shading fewer buildings and more street area (see Figure 18b, p. 49). By 11 a.m. the project would shade the east side of New Montgomery St. and some building facades fronting that side of the street (see Figure 18c, p. 50).

From April through August, the project would cast no shadow on the Garden Court and would shade only a portion of the lower level of the hotel, the eastern half of the Call Building, and a portion of New Montgomery St. between Jessie and Mission Sts.



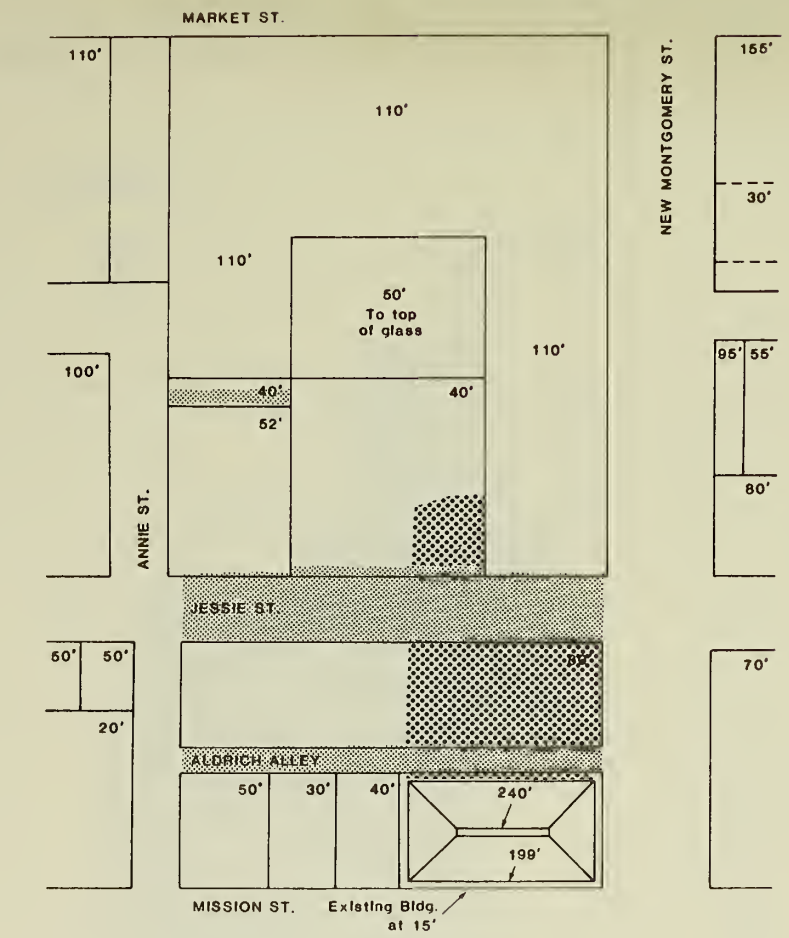


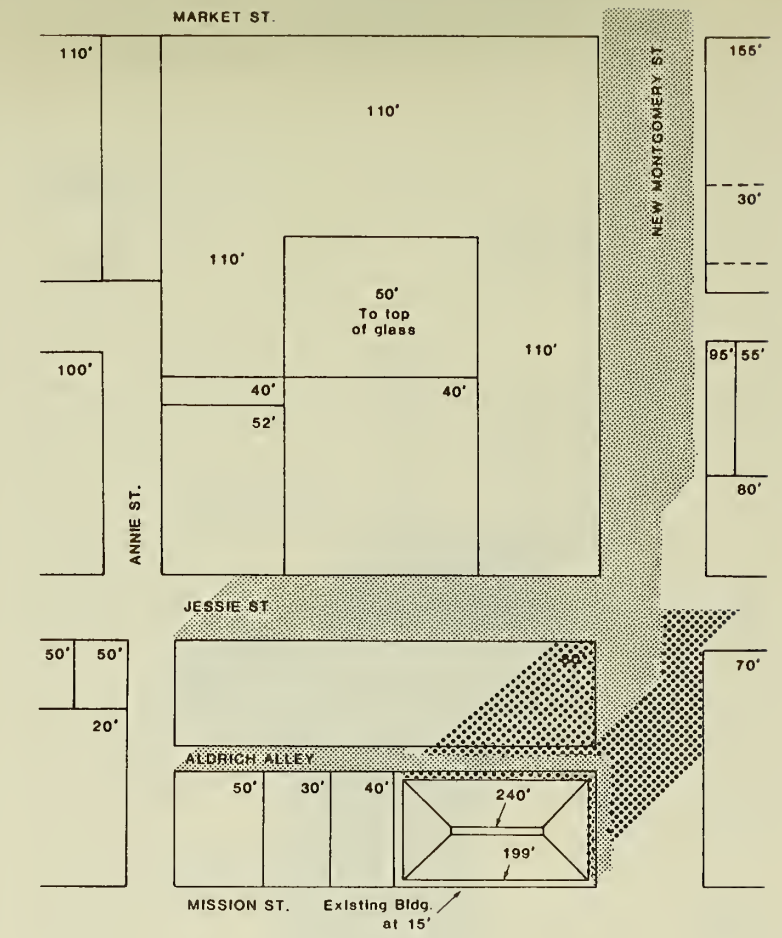
Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 13a: Shadow Patterns: September 24/March 21, 8:30 & 9:30 A.M.



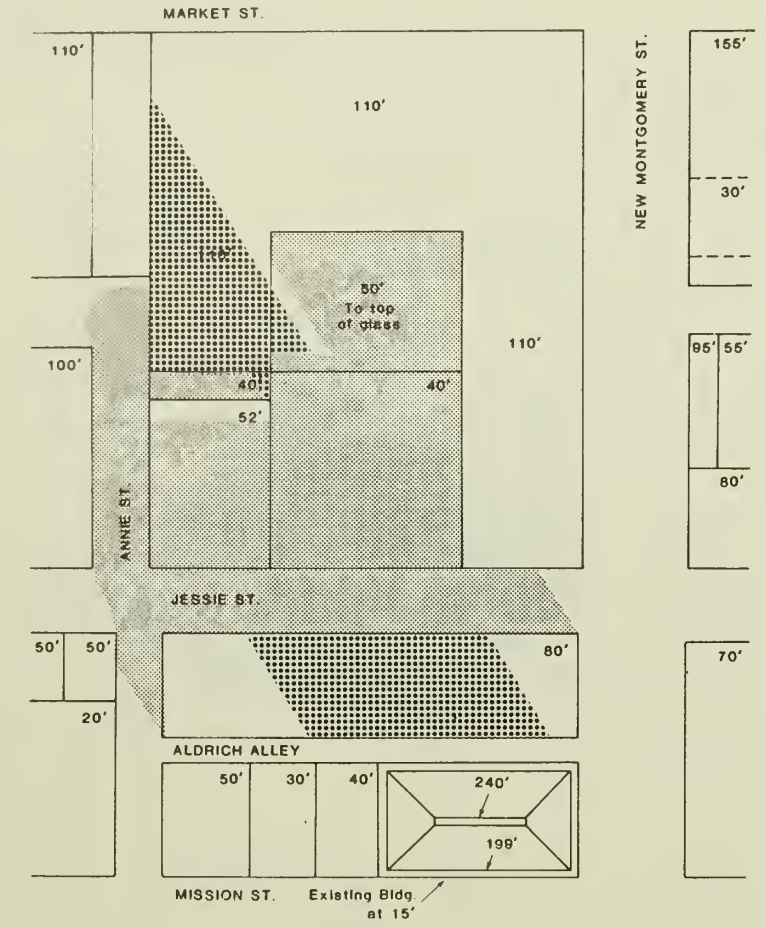


Project Shadow (new shadow only)

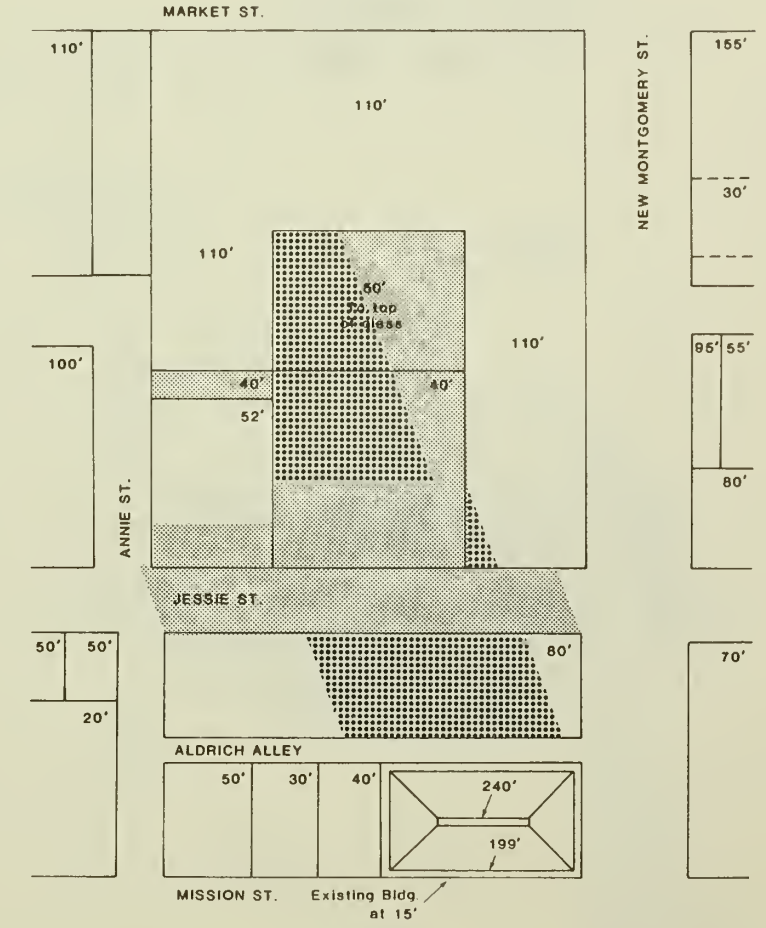
Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 13b: Shadow Patterns: September 24/March 21, 10 A.M. & 12 Noon



7:15 A.M.



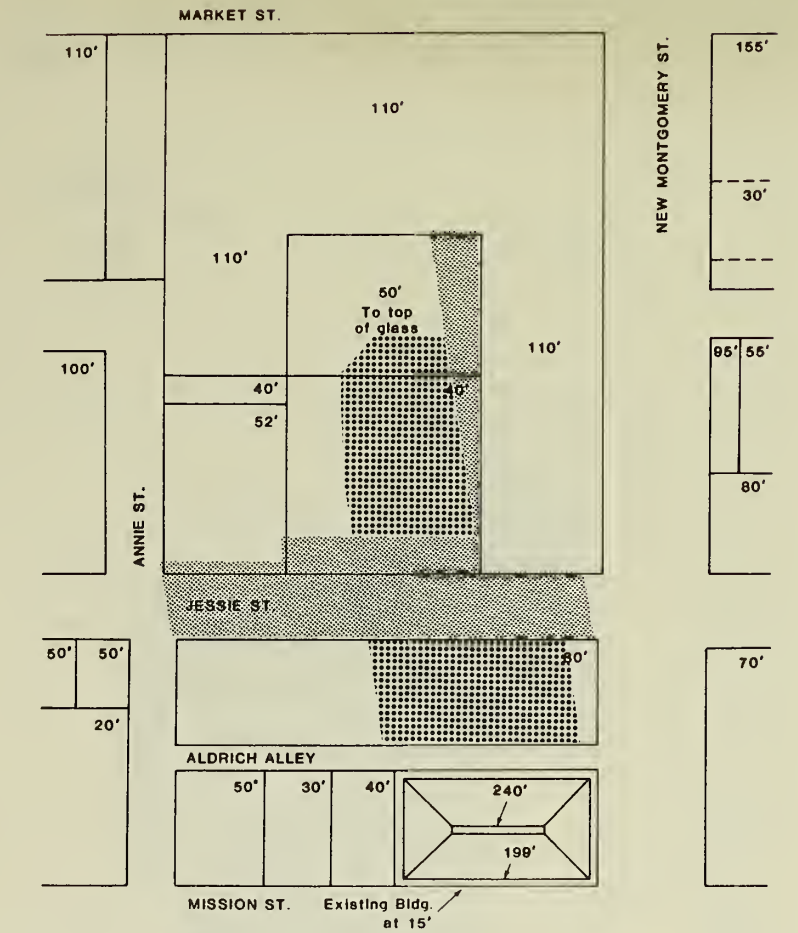
8:15 A.M.

Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 14a: Shadow Patterns: October 6/March 8, 7:15 & 8:15 A.M.

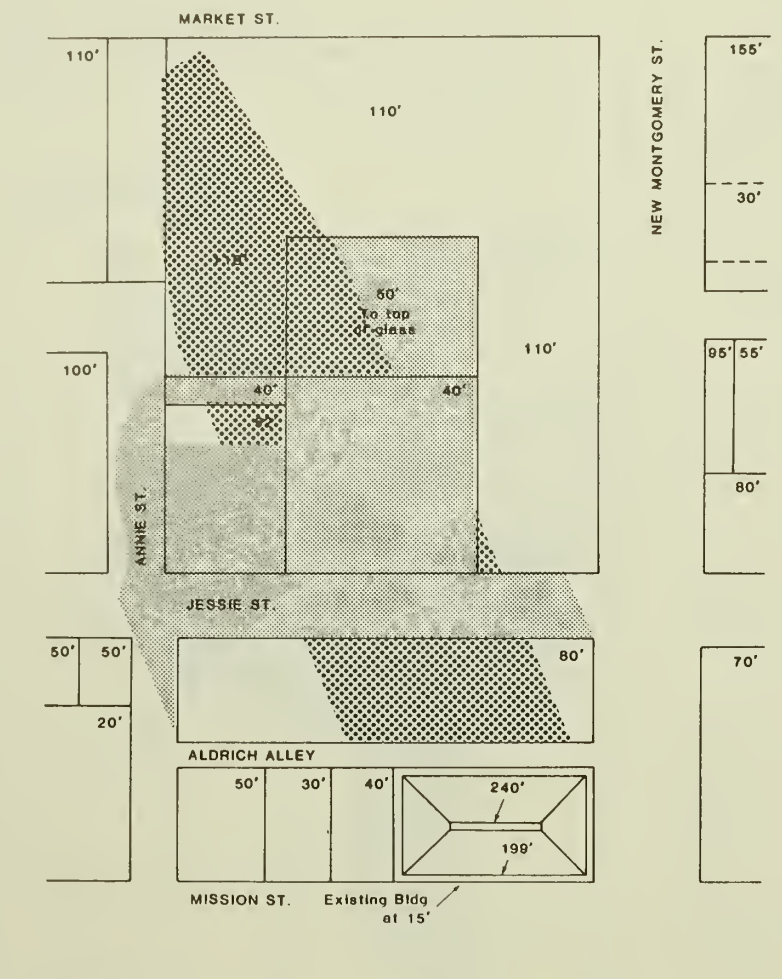


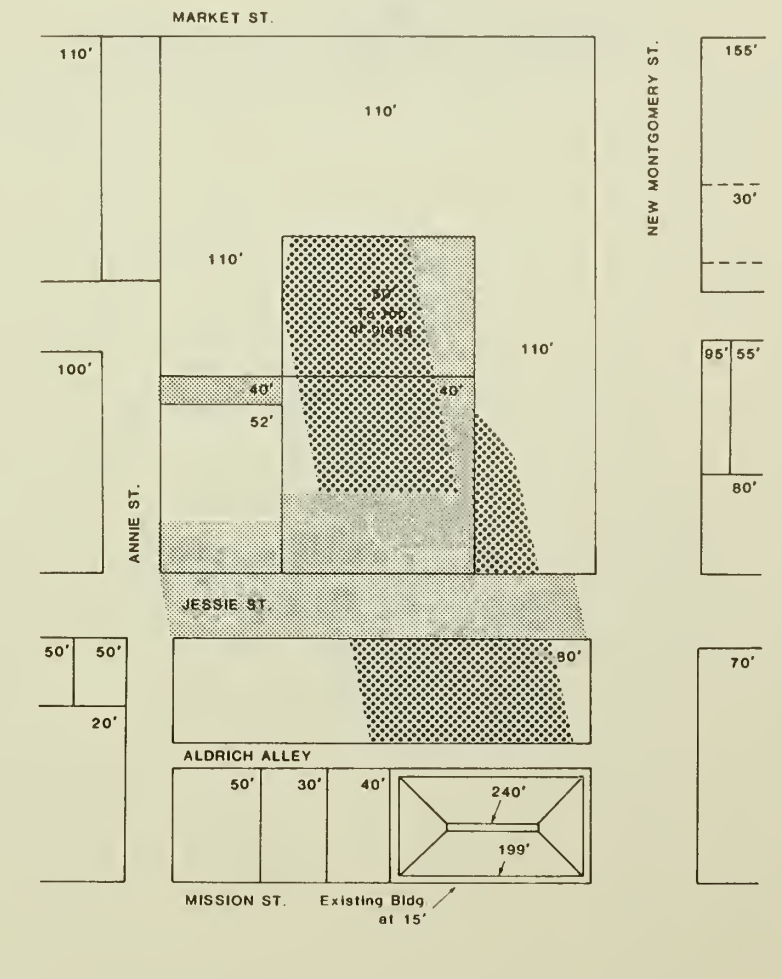
Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 14b: Shadow Patterns: October 6/March 8, 9:15 A.M.



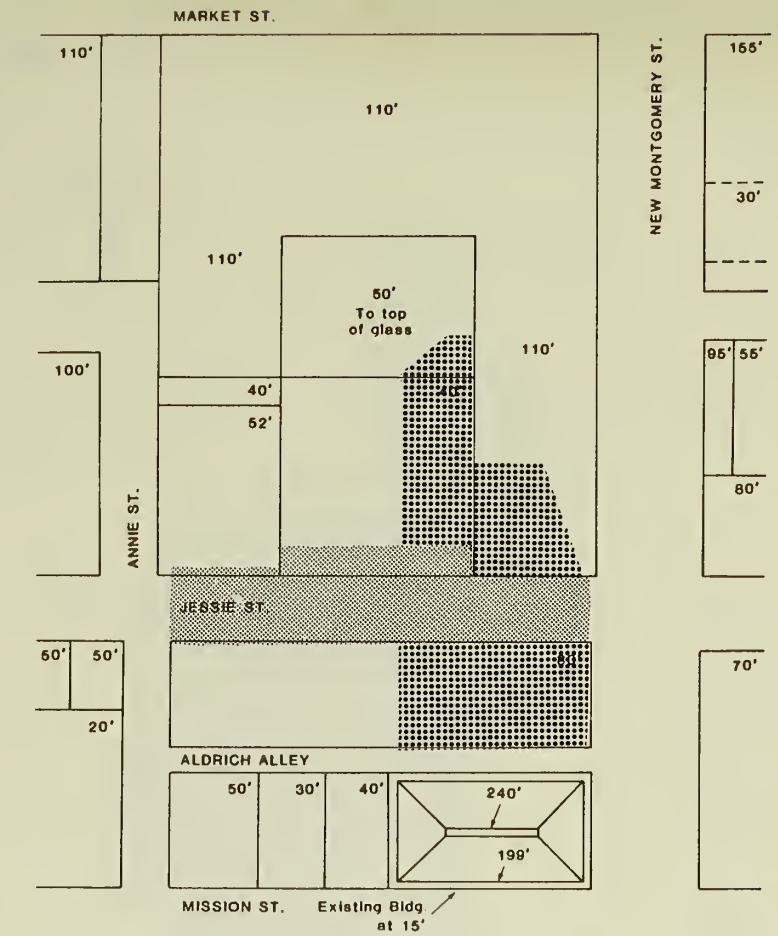


Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 15a: Shadow Patterns: October 20/February 23, 7:45 & 8:45 A.M.

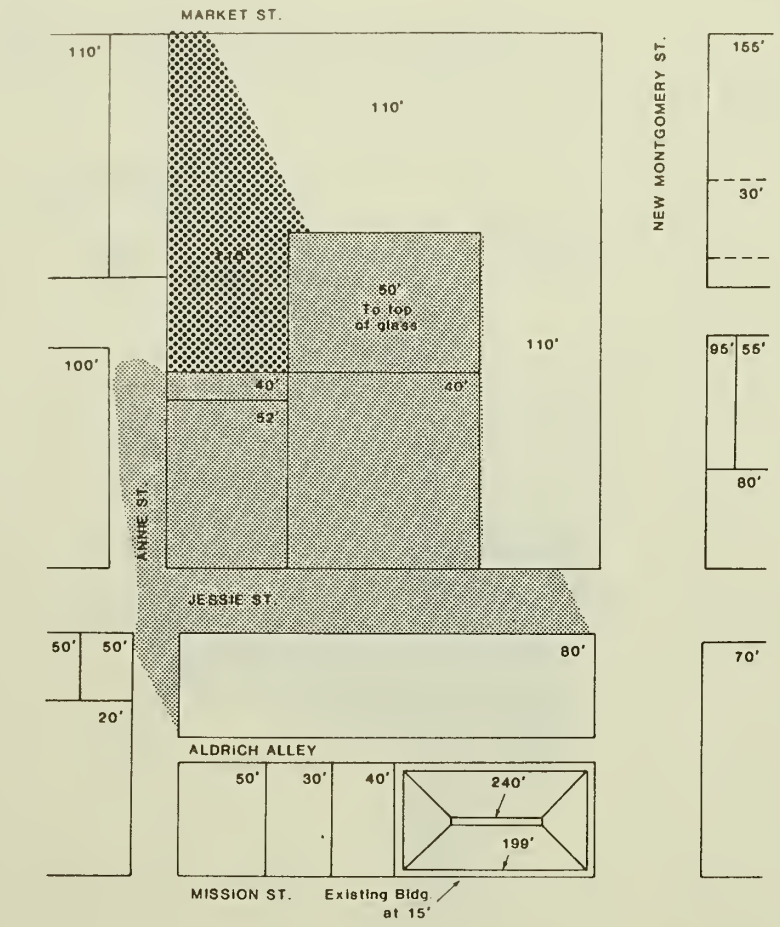


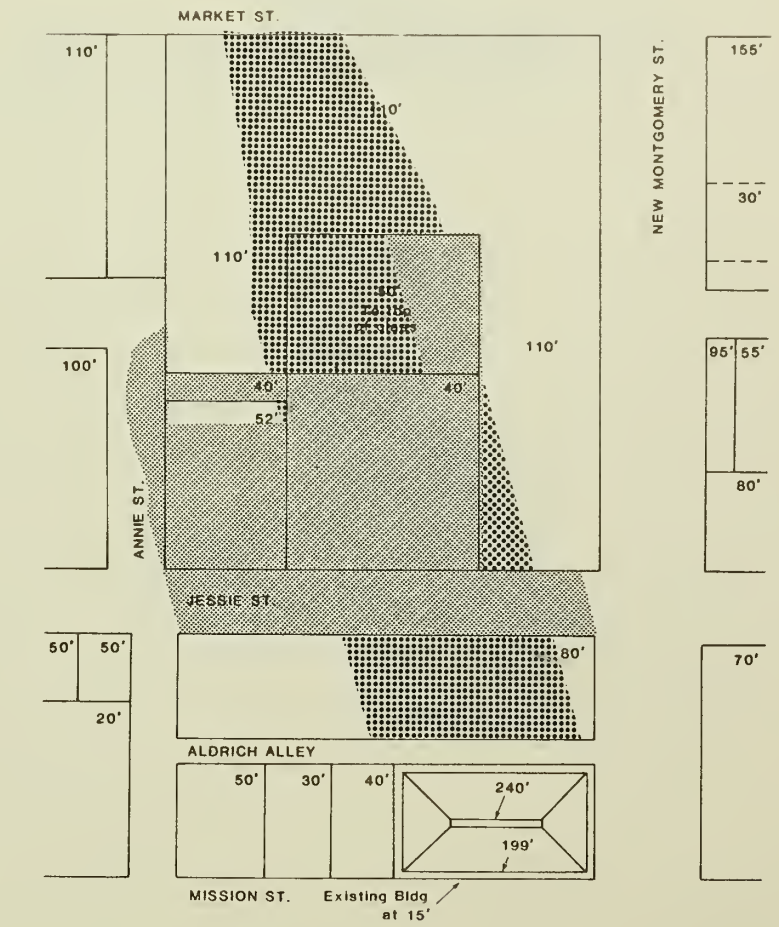
Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 15b: Shadow Patterns: October 20/February 23, 9:45 A.M.



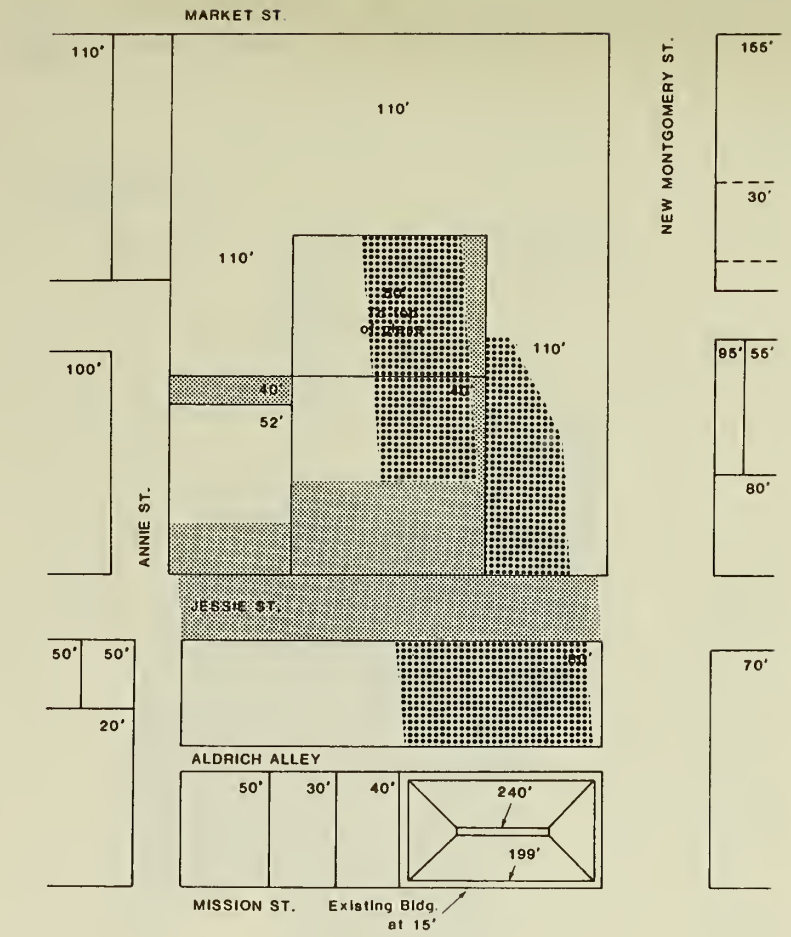


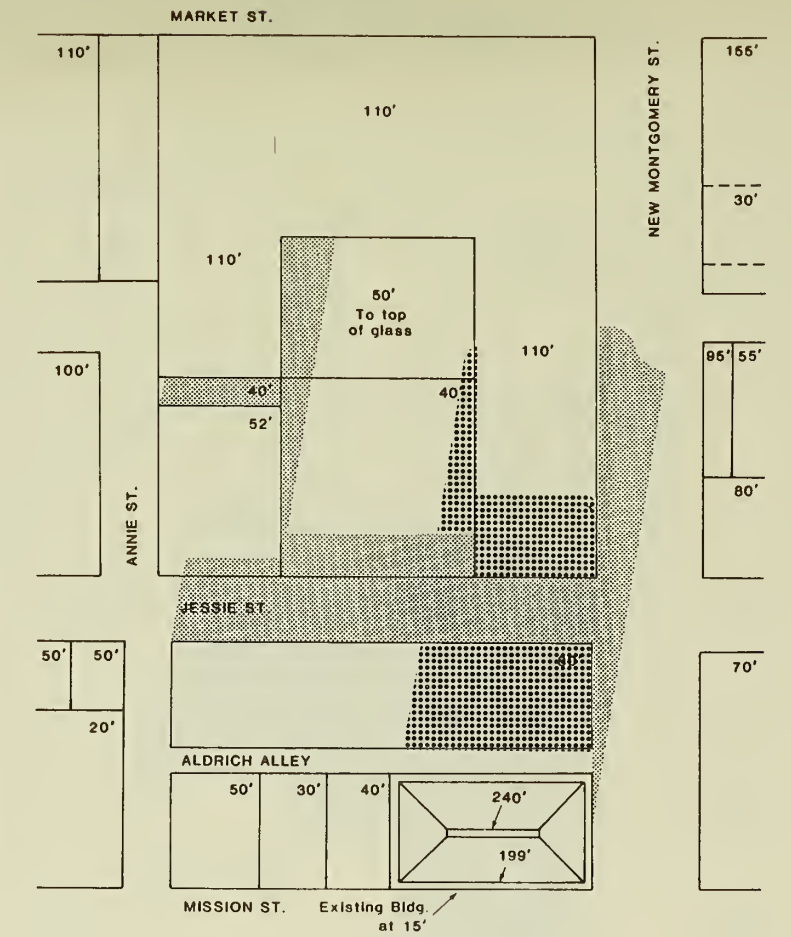
Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 16a: Shadow Patterns: November 4/February 8, 7 & 8 A.M.



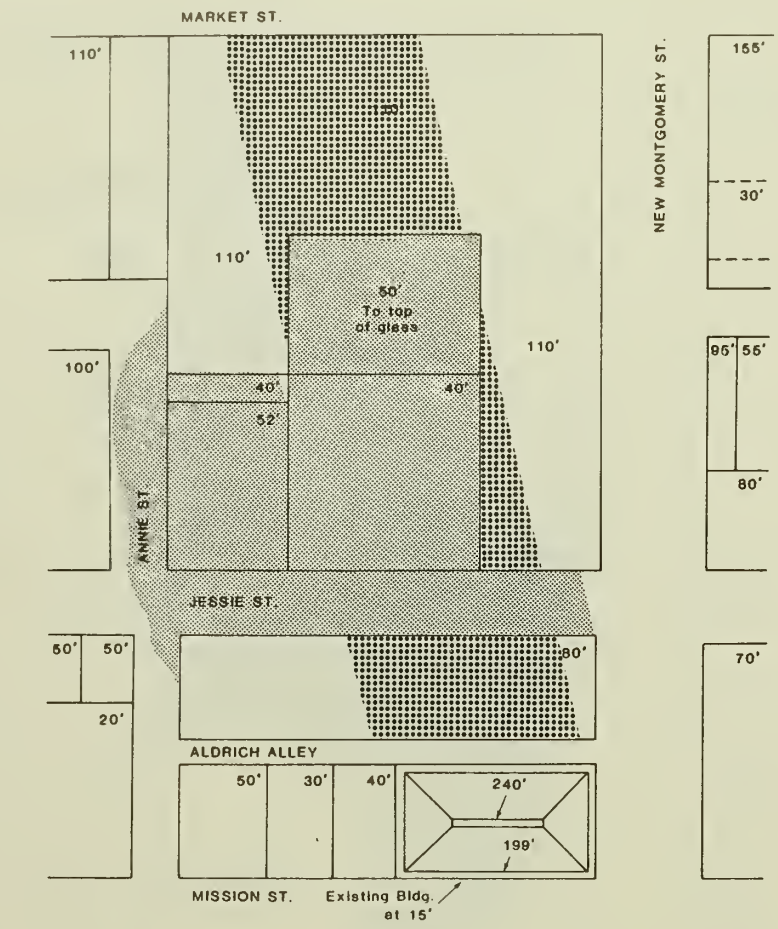


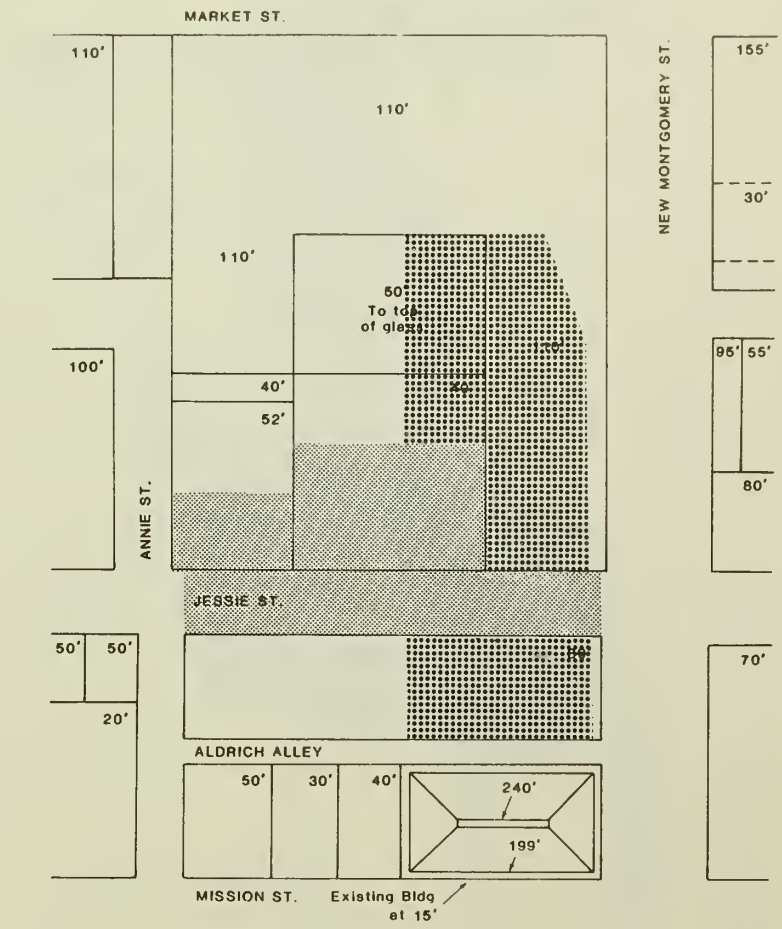
Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 16b: Shadow Patterns: November 4/February 8, 9 & 10 A.M.



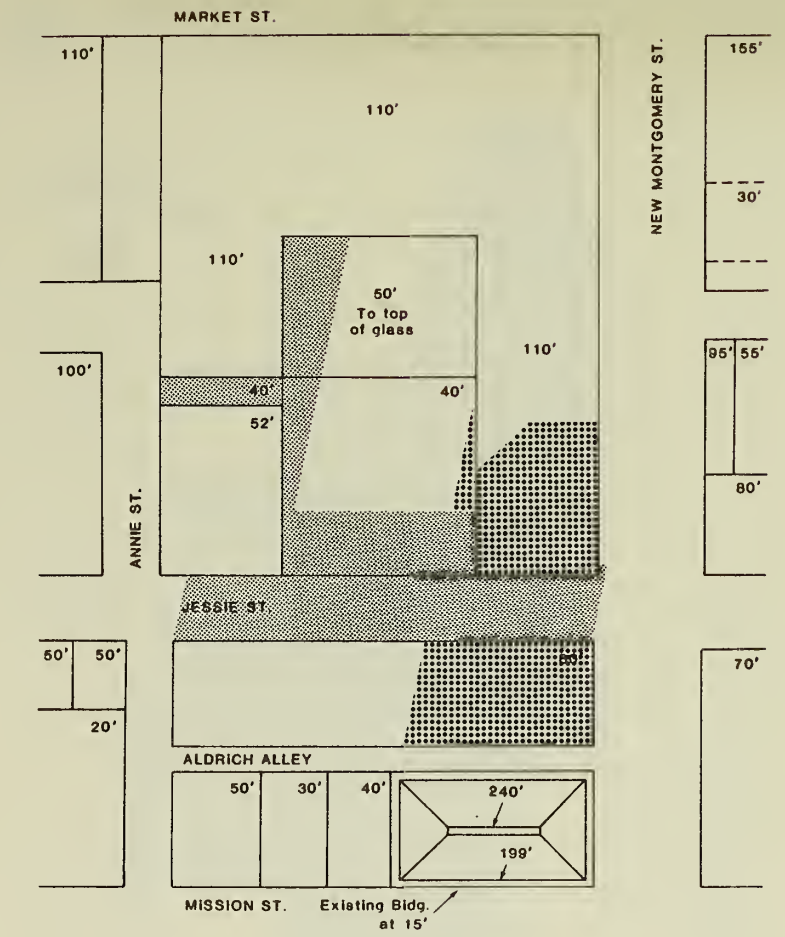


Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 17a: Shadow Patterns: November 22/January 21, 8 & 9 A.M.

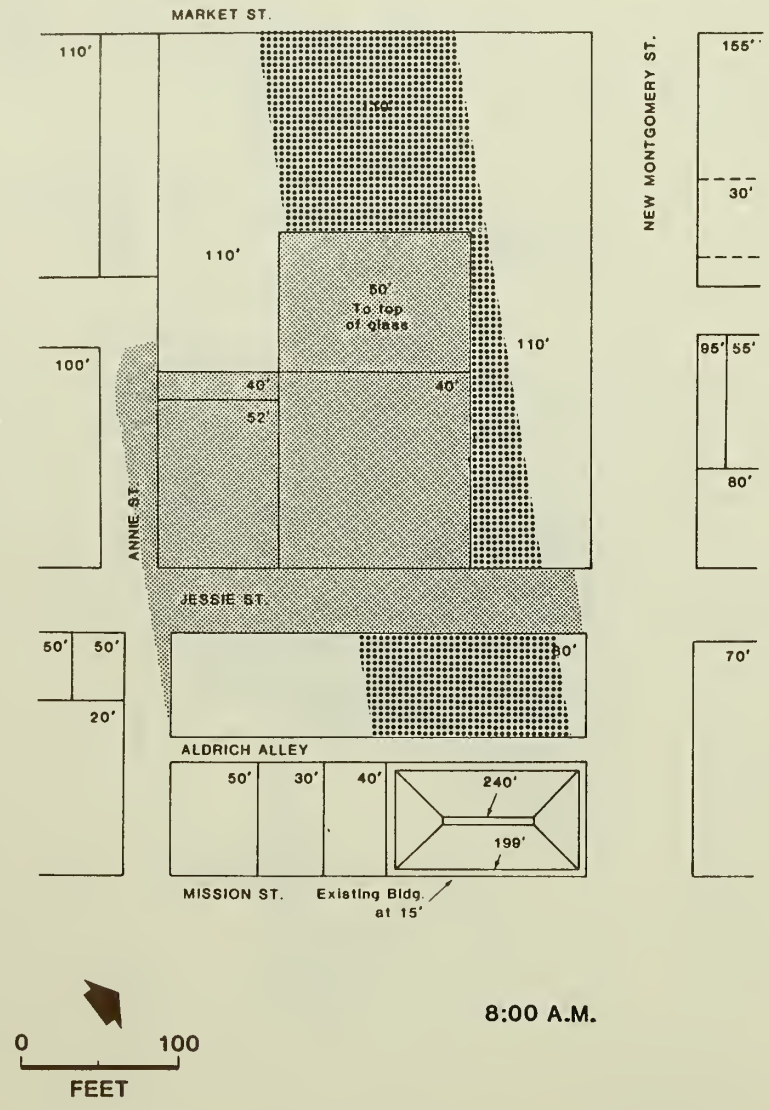


Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 17b: Shadow Patterns: November 22/January 21, 10 A.M.

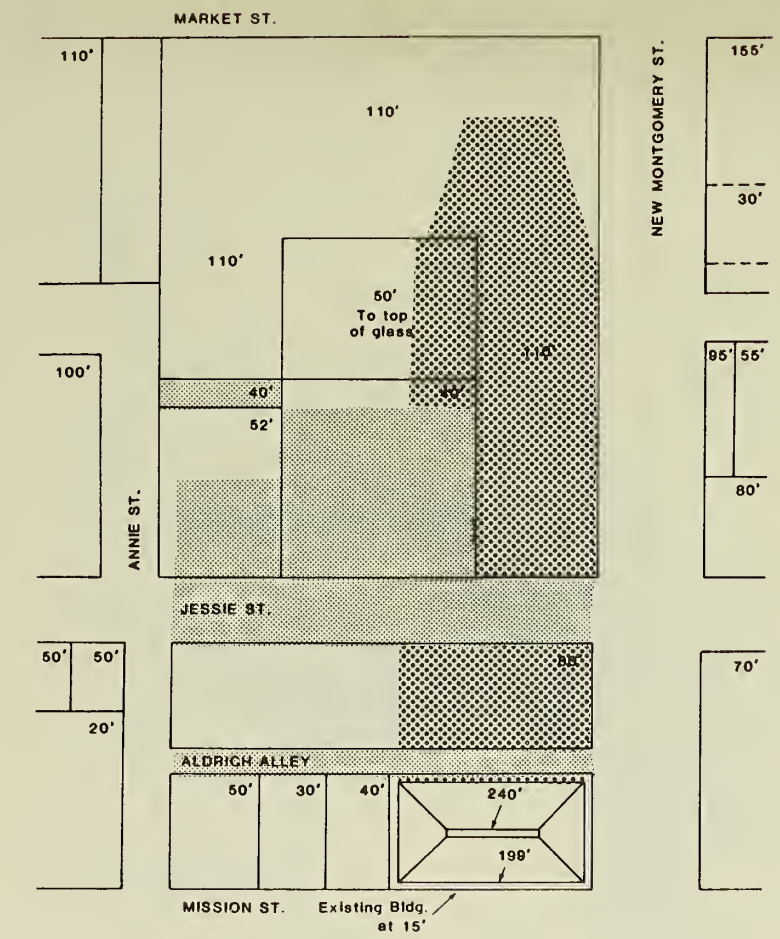


Project Shadow (new shadow only)

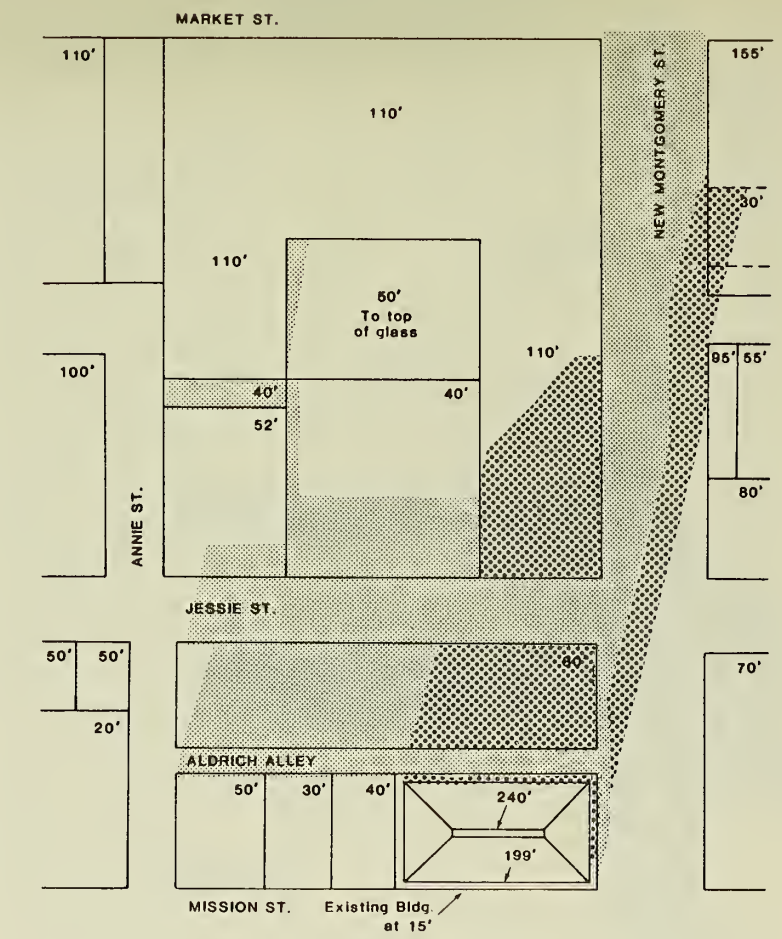
Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 18a: Shadow Patterns: December 22, 8 A.M.



9:00 A.M.



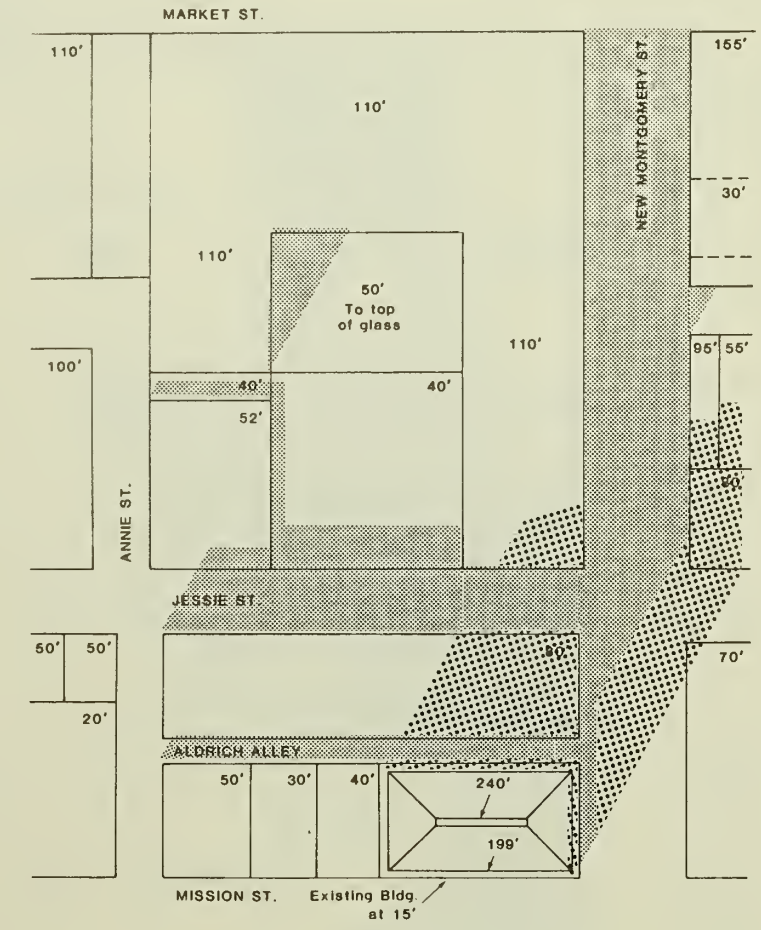
10:00 A.M.

Project Shadow (new shadow only)

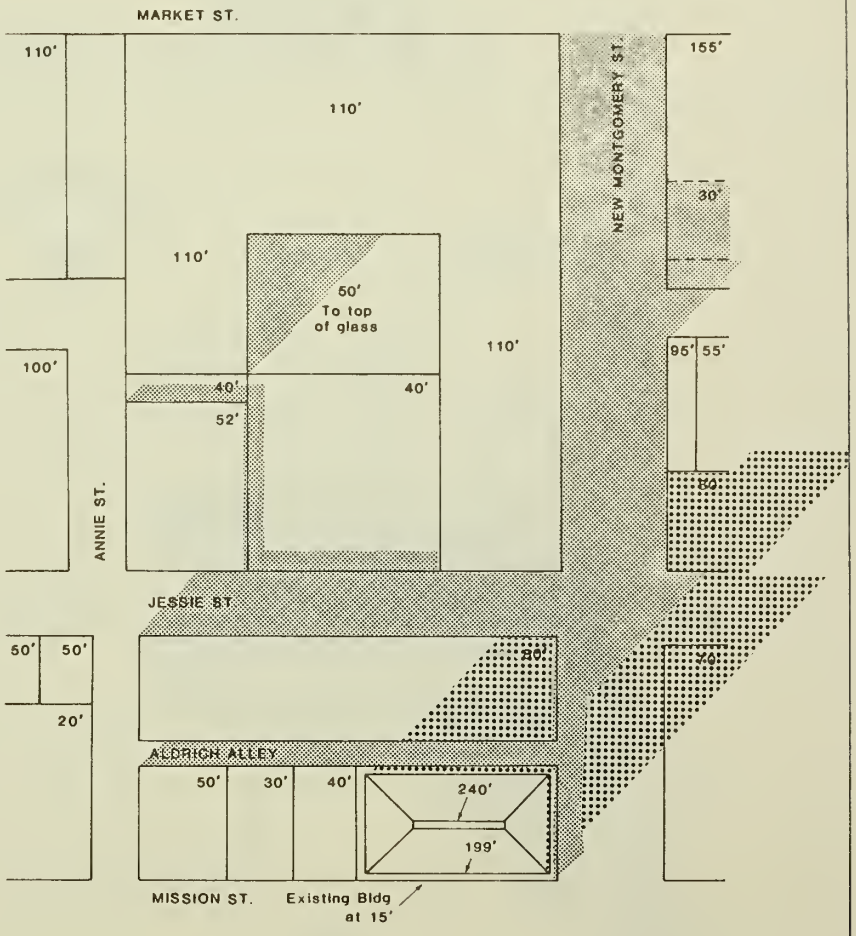
Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 18b: Shadow Patterns: December 22, 9 & 10 A.M.



11:00 A.M.



12 NOON

Project Shadow (new shadow only)

Existing Shadow

SOURCE: Environmental Science Associates, Inc.

FIGURE 18c: Shadow Patterns: December 22, 11 A.M. & 12 Noon

B. EMPLOYMENT, HOUSING, AND FISCAL FACTORS

OFFICE SPACE IN SAN FRANCISCO

The proposed project would provide about 124,300 gross sq. ft. of new office space. The proposed project, together with other major downtown office buildings under construction and approved as of November 1981, would result in approximately 8.9 million gross sq. ft. of office space (see Appendix B, Table B-1, p. 120). Low vacancy rates together with rising rents suggest that the supply of new office space has been less than demand.

The growth of office space would continue the trend of regional growth in service sector and office headquarters activity and employment. Larger, newer buildings would be occupied primarily by tenants with many employees and those with the ability to pay higher rents. Because rent levels are lower for older buildings, space which is vacated by tenants relocating to newer buildings could become available for tenants who cannot afford higher rents for new office space./1/

PROJECT-RELATED EMPLOYMENT

The proposed project would result in demolition of the ground level and the second-floor level of the existing parking structure on the project site. The structure would be replaced by an office building with approximately 124,300 gross sq. ft. of office space. Ten jobs at the project site would be terminated or relocated. The future status of these employees has not been determined.

The proposed project would result in the creation of about 515 permanent jobs in 1984, the date of completion and occupancy. This would result in a net increase of 505 employees (includes all workers including business owners) on the project site. Because specific tenants of the office building are unknown at this time, the estimated number of employees was based on an average sq. ft. per employee for proposed uses as shown in Table 3.

TABLE 3: PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE

Employment Type	Building Space (Gross Sq. Ft.)	Space/Employee (Sq. Ft.)*	Projected Number of Employees**
Office	124,300	250	500
Retail	3,350	400	8
Building Maintenance	135,500	30,000	5
TOTAL EMPLOYMENT			515 (rounded)

* California Office of Planning and Research, January 1978, Economic Practices Manual, pp. 35-37.
** Rounded to nearest five.

SOURCE: Environmental Science Associates, Inc.

BAY AREA EMPLOYMENT MULTIPLIER EFFECTS AND CONSTRUCTION EMPLOYMENT

Secondary employment and income effects would result from permanent project employment because each employed person would generate additional employment by his or her demand for goods and services; this is called the multiplier effect. Assuming that jobs created as a result of the project were primarily in finance, insurance, and real estate industries, about 595 additional jobs in other sectors of the Bay Area economy would result./2/ Total Bay Area employment attributable to the project would be about 1,100 (505 net primary jobs plus 595 created by the multiplier). It is anticipated that many of the secondary jobs would be located in San Francisco.

The project would require about 85 person-years of construction labor, averaging about 55 full-time jobs throughout the 18-month construction period. About 130 additional person-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction./2/

HOUSING

As indicated in the previous subsection, the project would result in the generation of 515 full-time jobs, a net increase in downtown employment of approximately 505 jobs in 1984. To the extent that the project would attract out-of-area employees and contribute to the formation of additional households by existing area residents, it would also contribute to increasing local housing demand and a jobs/housing imbalance.

Concerned with the impacts of cumulative office development on the San Francisco housing market, the Planning Commission has recently been requiring office developers to cause housing to be constructed in the City. Downtown office projects that have been approved since August 9, 1979, or are currently in the environmental review process have totaled about 9.8 million gross sq. ft. of office space./3/ On the assumption that the housing requirement formula for new office development contained in "Office Housing Production Program (OHPP) Interim Guidelines" (January 1982) reflects the actual demand for housing in San Francisco, office development would result in the demand for about 8,700 households in San Francisco when all projects are fully occupied./4/ This impact on the housing market would be mitigated to a certain extent because office developers have agreed to provide through City Planning Commission final approval resolutions, or have proposed on-site, about 3,300 housing units as of April, 1982. The unmet housing demand resulting from cumulative office development would be for about 5,400 units, based on the OHPP formula. This figure would be reduced by projects that have been approved with a commitment to an unspecified number of housing units. An additional 785,000 gross sq. ft. of office space is in the preliminary stages of the environmental review process./3/ This space has not been included in the above calculations because preliminary designs are subject to revision, or withdrawal, and could adversely affect the accuracy of the calculation of housing demand.

The demand for 5,400 units in San Francisco that is assumed due to this office development, but not provided for through office developer-sponsored housing construction, would add to housing demand in San Francisco. Increasing demand could result in higher housing prices, higher rents, and lower vacancy rates.

Downtown office workers desiring to live in San Francisco who are unable to find housing in the City would be forced to seek housing in other Bay Area communities and pay higher commuting costs in dollars, in energy consumption, and in time. About 60% of office workers are not expected to seek housing in San Francisco and a portion of the 40% who desire to live in San Francisco may be unable to find housing here. This resulting demand for housing in other Bay Area communities attributable to downtown San Francisco office development may result in higher housing costs and lower vacancy rates in these other communities. It is not possible to predict how such factors would be affected in these other communities or where those people preferring to live in San Francisco would settle if they cannot settle in San Francisco. This demand, however, may stimulate the house construction industry and could benefit the building trades.

While cumulative office development is attracting more workers to the City and resulting in increased demand for housing, many other factors affect the housing market. The current slowdown in new housing construction is a national problem resulting from a variety of economic factors, including high construction costs and mortgage interest rates. The demand for housing in San Francisco may be partly attributable to immigration that is independent of downtown office development.

Residency patterns for new employees that would be generated by the project are based on housing assumptions developed by the San Francisco Department of City Planning in the OHPP memorandum and by approximate residency patterns of downtown office employees surveyed for five other Downtown EIRs (see Appendix B, Table B-2, p. 122). It is assumed that about 40% of project employees are expected to seek residence in San Francisco, 18% on the Peninsula, 30% in the East Bay, and 12% in the North Bay. The City housing formula uses the following assumptions for the housing demand in San Francisco: office use generates one employee for each 250 sq. ft., 40% of all employees will desire to live in San Francisco and 1.8 working adults occupy each housing unit. According to the Department of City Planning housing formula, the proposed project would generate a demand for about 110 units of housing in San Francisco. Based on the assumptions documented in 101 Montgomery Street, Final EIR, that between 15% and 30% of new employees

would be expected to move to San Francisco and each household would be occupied by 1.4 workers,/5/ the project would result in 55 to 105 new households in San Francisco.

Based on 1.3 working adults per household,/6/ the proposed project would generate a demand for approximately 70 housing units on the Peninsula, 115 housing units in the East Bay, and 45 housing units in the North Bay (see Appendix B, Table B-2, p. 122).

HOUSING AFFORDABILITY

Housing affordability is determined by a number of factors, usually in some combination, such as the number of potential buyers in a household and the income level of each, housing preferences, existing equity and savings and access to credit, and general housing market and economy considerations, including housing supply and quality, and the cost of financing.

A survey of downtown office workers by the San Francisco Planning and Urban Renewal Association (SPUR) in 1974 provides information on salary ranges and estimates an average annual income level of $16,300./7/ Given that the weekly earning of non-supervisory finance, insurance, and real estate sector workers increased about 67% nationwide between 1974 and December 1981,/8/ inflating the $16,300 figure yields an average salary of about $27,200 for downtown office workers. Although the SPUR data have been inflated to 1982 levels, there is no way to verify that the distribution of job classifications has remained the same since 1974, or whether salary levels have kept pace with or exceeded the rise in the nationwide Bureau of Labor Statistics Index.

More recent published information on office workers in the Bay Area indicates that the 1980 annual salary for support and clerical personnel ranged from about $8,000 to $29,000./9/ Wage information is not available for most professional occupational categories, with the exception of computer system analysts and drafters, who have mean annual salaries of $25,740 and $20,000, respectively;/9/ there is no known published data on income levels specifically for workers in San Francisco since the SPUR study. An October 1981 survey of 60% of the tenants at 601 Montgomery St. revealed that about

34% of the office workers are professionals with salaries ranging from $21,000 to $300,000 (average $90,000); 36% are middle management personnel with salaries ranging from $12,000 to $70,000 (average $45,000), and 30% are secretarial/support workers with salaries ranging from $10,000 to $35,000 (average $19,200)./10/ Tenants of the 601 Montgomery St. building are primarily law, insurance, and professional staff rather than clerical staff, thus contributing to the relatively high average salary ($52,560) of this building's employees.

Without knowing the office tenants that would occupy the project, it is impossible to state with certainty the salaries of project employees. From the above information, annual salaries could range from about $8,000 to $300,000 and would probably average between $25,000 and $30,000. Consequently, this analysis for the project assumes an average salary of about $27,200 for downtown office workers (the inflated SPUR data discussed above).

Financial institutions are currently allowing 35% of a buyer's gross monthly income for mortgage payments. Information from the San Francisco Board of Realtors shows that the average selling price of a home in the City in 1981 was $151,200. The sales prices of homes sold in the week of October 1, 1981 ranged from $95,000 to $236,750./11/ At an interest rate of 15%, a 20% down payment and a loan term of 30 years, monthly payments of about $1,500.00 would be required for a dwelling selling for $151,000./12/

The 1980 Census data for rental housing show that the median rent was $266 in San Francisco and the vacancy rate was 2.7%. While the Census data reflect the entire rental stock, not all types of units would be available to new households. Stable households in the city may have occupied the same unit for many years. Lower-priced units probably are rented quickly and may not appear in newspaper advertisements. In certain instances, an apartment or dwelling unit would be shared by unrelated persons.

Based on the information provided above, it is concluded that most project workers would not be able to afford the median price of ownership housing in San Francisco, although a significant minority (perhaps one-third) would be able to do so. Based on the assumptions stated, almost all project employees

would be able to afford rental housing in San Francisco. These conclusions should be qualified because household circumstances vary. Housing affordability is determined not only by household income and price of housing, but also by the equity in existing real estate, savings, debt, access to credit, interest rates, number of dependents, number of wage earners in a household, tastes and preferences.

FISCAL EFFECTS

Revenues to the City

The project would have a fair market value of about $19.3 million (in 1981 dollars)./13/ Property is now assessed at 100% of fair market value. Based on the property's full market value, the project would generate about $229,000 in revenue to the City's General Fund at the Fiscal Year 1981-82 property tax rate of $1.19 per one hundred dollars of market value. This would be a net increase of about $219,000 over the property tax revenue generated by the site in 1981.

Currently, a payroll tax is paid on the earnings of ten employees at the project site. At a rate of 1.5% of total earnings, payroll tax revenues currently total about $1,500 annually./14/ Payroll taxes would be paid to the City General Fund on the earnings of approximately 400 of the 515 employees within the proposed office building. The remainder would be exempt from the tax either because they would work for banks or insurance companies, which are not required to pay San Francisco payroll taxes, because they would work for small, retail tenants with tax liabilities less than $500, or because they would be owners of businesses, who are also exempt. Based on an average wage of $27,200 for office workers in 1981, the payroll tax revenues from the project would be about $165,000, a net increase of about $163,500 above the 1981 revenues./15/

The average office worker in downtown San Francisco is estimated to make taxable expenditures of $1,195 annually in the central business district./16/ Sales tax revenues allocated to the City and County of San Francisco are 1.25% of taxable sales. Estimated sales tax revenues generated for the City

by project employees' expenditures would be about $7,700. Sales tax revenue would also be generated by retail uses in the project; this amount cannot be determined until the types of businesses are identified. In addition, employees on the project site would generate about $2,800 from the half-cent transit sales tax. Of that amount, $2,100 would go to BART directly and the remaining $700 would be distributed by the Metropolitan Transportation Commission to BART, Muni and AC Transit. Sales tax revenues generated by the existing employees on the project site are negligible.

Because the project site is currently occupied by a parking structure, the use (short- and long-term parking) generates a 15% San Francisco City parking tax. The 15% parking tax was enacted by Ordinance 286-70, Part 3, Article 9 of the Municipal Code. The tax is normally included in the parking fee. Information relating to gross receipts from the parking garage is held in confidence by the City and is therefore not available. An estimate of the 15% parking tax was based on a low and high range of gross receipts./17/ The annual parking tax for the low gross receipts would be about $33,000; the annual parking tax for the high gross receipts would be about $54,000. For the purpose of this report, the estimated annual parking tax was placed at a median value (between the high and low gross receipts) of about $43,000.

It is estimated that the project would generate about $14,500 in utility users' tax revenues to the City's General Fund./18/

On the assumptions that annual rent would be $35 to $50 per sq. ft. in 1984, and that the annual gross receipts tax rate remains 0.3%, the project would generate about $13,500 to $19,300 of tax revenues from annual rental income (assuming full occupancy)./19/

General Fund revenues for the City and County of San Francisco from the project would total about $430,000, based on tax rates and fees in effect in early 1982. (Where ranges of revenue were estimated, the median value was used.) General Fund revenues from existing uses on the site totaled about $55,000 in 1981; the project would result in about a $375,000 net increase in General Fund revenues.

Revenues to Muni

The City's General Fund provides a subsidy to the Municipal Railway's operating budget that covers the difference between Muni's costs and the revenue Muni receives from fares and from federal and state sources. This subsidy represents the cost of Muni to the City. The average deficit per ride in 1981-82 is estimated by Muni at $0.39./20/ On the assumption that about three of the employees who work on-site ride Muni to and from work, the existing General Fund subsidy to Muni required by commuting on-site employees is about $550 per year./21, 22/ On the assumption that the 1981-82 subsidy would remain the same in 1984 and that 29% of the project employees would ride Muni to work, the project would create the need for a General Fund subsidy to Muni of about $27,250 at 1981 costs, a net subsidy increase of about $26,700./23/

The project would help pay for the Muni deficit through its revenue contributions to the General Fund. In the 1980-81 budget, ten percent of discretionary General Fund revenues were allocated to Muni. If this percentage were to remain constant, the project would generate about $43,300 (in 1981 dollars) in the General Fund revenues to Muni in 1984.

On April 27, 1981, the San Francisco Board of Supervisors approved a proposal to assess new downtown commercial developments to help support Muni./24/ The program calls for levying a one-time fee of up to $5.00 per gross sq. ft. on new downtown office space; however, this assessment fee is under litigation. If the assessment fee were to go into effect as proposed, the project would generate about $621,500 for the one-time Muni fee. Other legislation would create a downtown assessment district in which all property owners would be assessed a yearly fee; this proposed ordinance providing for the annual assessment for Muni is currently being considered by the Board of Supervisors.

BART

BART fares cover about 40% of BART costs. For each BART passenger trip an average of $1.00 is paid by fares, and an additional $1.50 in costs must be supported by some other revenue source. Over 86% of this additional cost is supported by the special BART half-cent sales tax.

On the assumption that the 1981 deficit per rider would be the same in 1985 and that 15% of the project employees would ride BART to work, the project would generate a deficit of about $54,200 per year./25/ After subtraction of BART's revenues from sales and property taxes (about $17,300) which would be generated by the project, BART's annual net deficit would be about $36,900.

NOTES - Employment, Housing, and Fiscal Factors

/1/ Association of Bay Area Governments (ABAG), April 1981, Bay Area Office Growth, working papers on the Region's Economy, Number One.

/2/ Projections are based on the Bay Area Input-Output Model from Cooperative Extension Service, University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967-1974, July 1978. A multiplier of 1.18 was used for permanent employment and 1.55 for construction employment.

/3/ San Francisco Department of City Planning, "Cumulative Housing Demand List," May, 1982. The list of projects included in the analysis is available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor, San Francisco, CA.

/4/ $\frac{\text{9.8 million gross sq. ft.}}{\text{250 sq. ft. per employee}} \times \frac{\text{40\% who would desire to live in San Francisco}}{\text{1.8 workers per household}}$

= 8,700 households.

/5/ This estimate is derived by assuming, based on the SPUR study, that the workers who move will be roughly equally divided between married and single workers. For married workers, San Francisco workers per household were estimated based on the labor force participation rates of spouses of employed people and adjustments for unemployment and the distribution of employed San Francisco residents between jobs inside and outside San Francisco. For unmarried workers, it was assumed that half of them have another adult in their household. Using the labor force participation rates of single people, and making the same adjustments as in the case of spouses, an estimate of the number of San Francisco workers in unmarried households was derived (U.S. Department of Labor, Bureau of Labor Statistics, "Marital and Family Characteristics of the Labor Force, March 1979," Special Labor Force Report 237, January 1981; San Francisco Planning and Urban Renewal Association, Impact of Intensive High Rise Development on San Francisco, June 1975.)

/6/ Patricia Perry, Regional Planner, Association of Bay Area Governments (ABAG), telephone conversation, May 6, 1982. Based on estimates made from the preliminary census data (1980), the workers per household for the following counties were calculated:

County	Workers per household
Alameda	1.29
Marin	1.25
San Mateo	1.23

For the workers per household outside of San Francisco, 1.3 was used for this report.

/7/ San Francisco Planning and Urban Renewal Association (SPUR), June, 1975, Impact of Intensive High Rise Development in San Francisco, Detailed Findings.

/8/ Data are inflated by about 67%, the national average percentage increase in weekly earnings of nonsupervisory finance, insurance, and real estate employees between 1974 and the end of 1981 (U.S. Bureau of Labor Statistics, Monthly Labor Review, June 1975 and February 1982).

/9/ U.S. Department of Labor Statistics, "Area Wage Survey for the San Francisco-Oakland, CA Metropolitan Area," March 1981.

/10/ Montgomery/Washington Building FEIR, certified January 28, 1982, p. 75.

/11/ San Francisco Board of Realtors, October 5, 1981, "Multiple Sales Service." Annual data include all homes sold from February 11, 1981 to October 1, 1981.

/12/ These calculations assume that buyers are using conventional financing on a 30-year mortgage with 20% down payment at an 15% interest rate. It is noted that some buyers might borrow money to put down larger down payments or find loans with lower interest rates (such as owner-financing).

/13/ Based on a fair market value of about $155 per sq. ft. as estimated for other proposed high-rise office buildings in downtown San Francisco.

/14/ On the assumption that the labor on-site is unskilled, the average annual wage for existing workers was estimated to be $10,000 (about $4.80 per hour).

/15/ Downtown office workers earn an estimated $27,200 annually in 1982, based on average annual earnings of $16,300 for downtown office workers in 1974, in San Francisco Planning and Urban Renewal Association (SPUR), June 1975, Impact of Intensive High Rise Development in San Francisco, Detailed Findings. Data are inflated by about 67%, the national percentage increase in weekly earnings of finance, insurance and real estate employees between 1974 and the end of 1981 (U.S. Bureau of Labor Statistics, Monthly Labor Review, June 1975 and February 1982).

/16/ Taxable expenditures within the central business district per office worker were $714 per year in 1974 (SPUR, 1975). Using the same proportion of taxable expenditure to annual income (based on an average salary of about $27,200 in 1982), taxable expenditures per employee would be about $1,195.

/17/ The parking garage has an estimated 100 parking spaces. The gross receipts from the parking garage are unknown; therefore, the parking tax (15%) was based on assumptions which used a low and high range of estimated gross receipts. Information was based on the following parking garage characteristics: the total weekly hours of garage operation are 84.5; the garage is open Monday through Saturday; charges are $6.00 for an early bird special (in by 9:00 a.m., out by 6:30 p.m.); $8.00 maximum for the day; $1.00 per 20 minutes. An overall occupancy of about 70% was used; that is, of the 84.5 weekly hours that the garage is open, only 60 hours per week per space was assumed to be occupied.

The low revenue assumed that 50% of the parkers paid $6.00 per day; the remaining 50% of the parkers paid $8.00 per day. The calculations were as follows: $6.00 x 50 parking spaces x 312 days (one year) = $93,600;
$8.00 x 50 parking spaces x 312 days (one year) = $124,800;
Total = $218,400.
Source: Environmental Science Associates, Inc.

The high revenue assumed that:
20% of the parkers paid $1.00 per 20 minutes for 60 hours per week x 52 weeks = $187,200;
40% of the parkers paid $6.00 per day x 312 days (one year) = $74,800;
40% of the parkers paid $8.00 per day x 312 days (one year) = $99,840;
Total = $361,840.

The parking tax for the low gross receipts would be $32,760 ($218,400 x 15%); that for the high gross receipts would be $54,280 ($361,840 x 15%).

Assumptions were based on a preliminary study by ESA on a parking structure located several blocks from the project site.

/18/ Utility users' annual tax revenues were calculated as follows, using 1982 utility rates averaged from past EIR data:

(a) water: 802,125 cu. ft. x $0.00414 per cu. ft. x $0.05 tax rate = $166.

(b) gas: 28,000 therms per year x $0.49 per therm x $0.05 tax rate = $686.

(c) electricity: 1,690,480 kwh per year x $0.0707 per kwh x $0.05 tax rate = $5,976.

(d) telephone: 99,440 net sq. ft. x $1.40 per sq. ft. x $0.055 tax rate = $7,657.

TOTAL UTILITY TAX REVENUES: $14,485

Source: Environmental Science Associates, Inc.

/19/ Office and retail space: 128,900 gross sq. ft. An average rental rate between $35 and $50 for the year 1985 was used, based on projections from other proposed highrise office buildings in downtown San Francisco. Assume annual rent of $35 per sq. ft. (gross): 128,900 gross sq. ft. x $35 = $4,511,500 x $0.003 (tax rate on rental income) = $13,534.50. Assume annual rent of $50 per sq. ft. (gross): 128,900 gross sq. ft. x $50 = $6,445,000 x $0.003 (tax rate on rental income) = $19,335.

/20/ Bruce Bernard, Muni Chief Accountant, interview, October 28, 1981. Based on 1981-82 Muni net operating cost of $142,139,000, and net revenues of $87,833,000. On the assumption that the 1979 revenue passenger number of 139 million would be applicable in 1984, the average general fund deficit per ride would be $0.39. There has been no update of the ridership number since 1979; therefore, the deficit per ride of $0.39 is estimated.

/21/ Office of Environmental Review (OER), "Guidelines for Environmental Evaluation - Transportation Impacts," October, 1980.

/22/ Assuming 260 work days per year, two rides per day and absenteeism of ten percent (holiday, vacations, sick days), each worker will ride an estimated 468 times per year. Therefore, the cost is: 3 workers X 468 rides per year X $0.39 deficit per ride = $547, rounded to $550.

/23/ 515 workers X 29% ride Muni X 468 rides per year X $0.39 deficit per ride = $27,259 total subsidy to Muni due to the project. $27,259 - $547 = $26,712
a $26,700 net increase in subsidy to Muni due to the project.

/24/ San Francisco Ordinance No. 224-81, approved by the Board of Supervisors on April 27, 1981.

/25/ 515 workers X 15% ride BART X 468 rides per year X $1.50 cost per ride (deficit) = $54,229.50.

C. TRANSPORTATION

TRIP GENERATION

Project office and retail space would generate about 2300 person-trips per day, 1900 from the office space and 400 from the retail space./1/ The existing garage accommodates about 100 parked cars, generating an estimated 500 person-trips daily. The net increase in daily person-trips to the project site would be 1800.

P.M. peak-hour travel generated by the office and retail space would total about 425 trips. Estimates of travel by mode based on the existing pattern of

travel in the downtown area would distribute about 155 of these peak-hour trips to the automobile (36%), 125 to Muni (29%), and the remaining 145 principally to other public transit lines (36%). Of the 155 peak-hour trips by automobile, 20 drivers would park on site; others would compete for public parking off site. However, by the proposed date of occupancy of the project (1984), there would be essentially no vacancies in public parking in the City. Drivers from the project who would find public parking spaces through competition would displace other users of public parking, who would then resort to public transit. The same result would follow the displacement of 100 cars now parked on the site daily. The net effect on automobile use in the City would therefore be a far smaller increase than the 150 person-trips by auto projected for the project. By this process, Muni could get approximately 90 additional peak-hour trips beyond the 125 directly generated by people from the project. Trips on other public transit modes would be increased by a similar margin./2/ See Appendix C, Table C-4, p. 126 for estimates of travel on other transit agencies.

CUMULATIVE IMPACTS

Within a 2,000-ft. walking distance of the site are seven office buildings under construction (3.6 million gross sq. ft.), two approved for construction (0.7 million gross sq. ft.), and 21 proposed (6.3 million gross sq. ft.) /3/. Five hundred twenty-six housing units and one 704-room hotel are also proposed for the area. These new buildings would generate about 31,000 new p.m. peak-hour (person) trips, increasing patronage on the Muni lines in the area by about 12,800 persons. Peak-hour pedestrian trips in the area would be expected to increase by roughly 30%./3/

About 18 million gross sq. ft. of office space is proposed, approved for construction, or under construction in the City (see Table B-1, p. 120). If this growth is realized, demand for travel in and out of the City during the p.m. peak hour would increase by about 38,000 person-trips. Most of this peak-hour increase would be accommodated by some means other than increased automobile traffic, such as public transit, ridesharing, or an extended commute period given the limitations on automobile use discussed above.

PUBLIC TRANSIT

Muni

The total increase in peak-hour Muni patronage caused by the project would be about 215 persons, compared to about 30,000 riders on the 32 lines in the area (see Figure 19, p. 67). This 0.7% increase would be approximately equivalent to an average of 0.5 persons on each bus or cable car and one person on each Light Rail Vehicle (LRV). The effect of other development within a 2,000-ft. walking distance of the site would be a 43% increase in Muni patronage.

The Municipal Railway Five-Year Plan (1981-86) envisions a 25% increase in capacity which would be achieved in several ways, and a concurrent 25% growth in demand of the downtown service. Twenty-two additional LRVs are on order for use in the Muni Metro System. Construction of a loop to replace the existing stub-end terminal at The Embarcadero is planned, with a possible surface extension on The Embarcadero; implementation is partly contingent upon federal funding, which has not yet been secured. Also planned is the introduction of articulated buses with a capacity 50% larger than conventional buses./4/ None have been ordered to date./5/ Muni plans to put out a bid for 50 - 100 buses in September 1982; delivery would follow in about 18 months. Further integration of BART into the downtown transit system is planned by allowing use of Muni Fast Passes for travel on BART trains within San Francisco. Increased capacity is planned with use of express buses.

Present scheduled outbound capacity on routes serving the Central Business District between 4:30 and 5:30 p.m. is about 47,000 passengers. The projected capacity in 1986 is about 54,000./4/ The increase in capacity is planned to approximately match the increase in demand, so that present operating conditions, such as excessive crowding on some vehicles, are not expected to improve.

BART

The BART system is currently operating at about 130% of its p.m. peak-hour seated transbay capacity of 11,200. It is anticipated that ridership and

capacity will increase concurrently by about five percent per year over the next five years. The planned capacity increase is contingent upon capital improvements, including laying of new tracks at locations in downtown Oakland and at the Daly City turnaround./6/ Potential development of 18 million sq. ft. of new office space in the City would create a demand for more than 4,000 new peak-hour trips on BART. This would represent more than a 36% increase in travel on BART. The five percent per year growth anticipated by BART planners would total a 27% increase in five years. Excess demand could be partly accommodated in AC Transit buses.

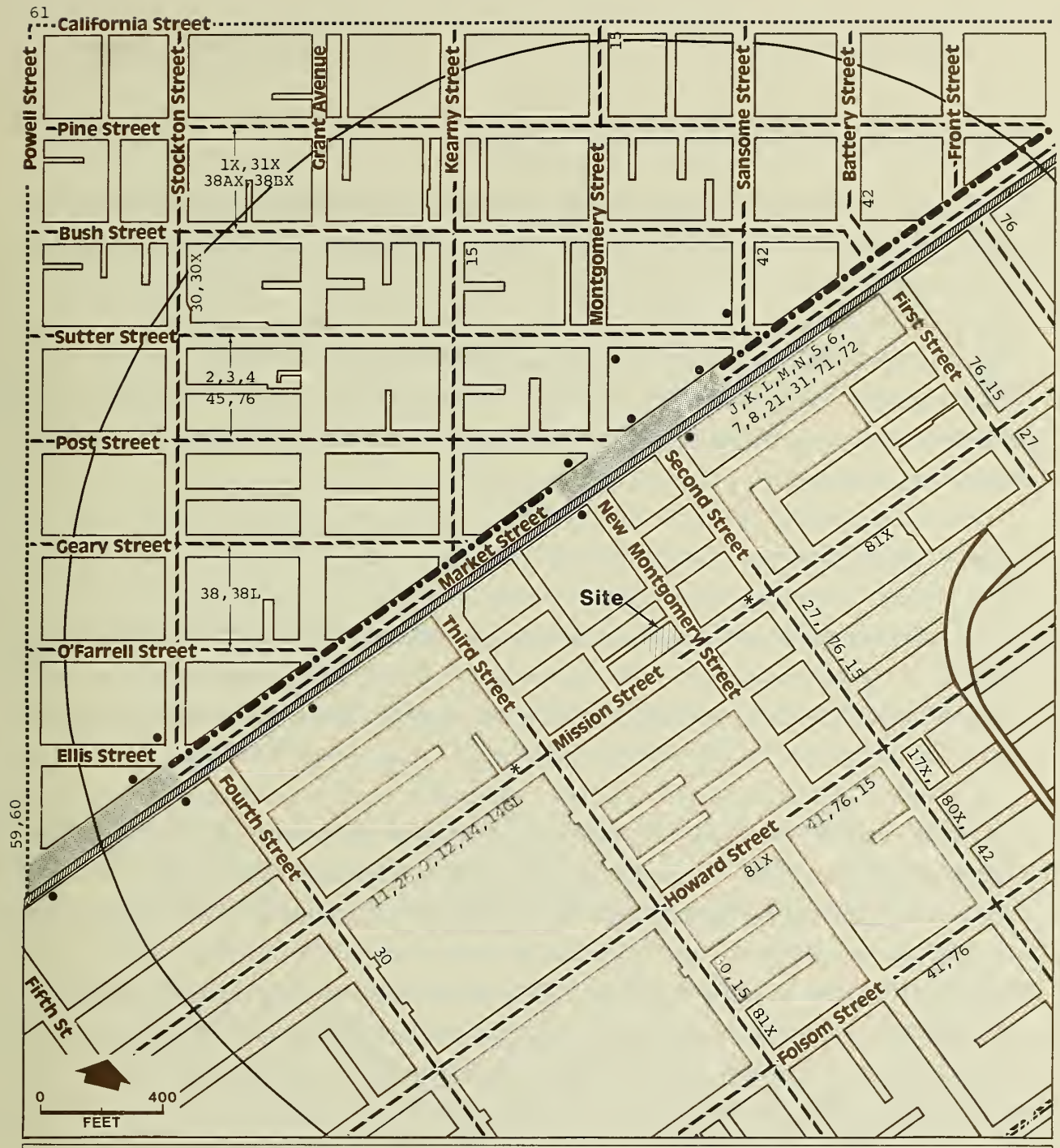
The effect of the proposed project would be to add a total of about 65 outbound p.m. peak-hour trips to BART, or about four per train.

AC Transit

AC Transit carries about 7,800 passengers, 100% of seated capacity, during the p.m. peak hour. Individual routes or buses may operate at higher load factors. Cumulative downtown development (18 million sq. ft. of office space) is projected to generate at least 5,000 additional AC Transit passenger trips during the p.m. peak-hour. There are presently no scheduled plans to purchase new buses./7/ New riders would at first be accommodated as standees. An overall increase in ridership of at most 50% could be accommodated in this manner if all buses were fully loaded.

SamTrans

SamTrans operates nine routes serving the downtown area during the p.m. peak hour, carrying about 1,200 passengers at 100% of seated capacity. Cumulative downtown development (18 million sq. ft. of office space) would increase ridership by more than 800. SamTrans will give priority to its commuter service to meet demand as the need arises./8/



Legend

- Pedestrian Entrances to Subway Stations
- BART and Muni Metro Station
- BART Route
- Muni Metro Subway
- Transit Route
- Cable Car Route
- 59,60,35 — Route Designation
- * — Nearest Mission Street Bus Stops
- 2000' Radius

FIGURE 19: Muni Routes Near the Project Site

SOURCE: San Francisco Municipal Railway Map, January 1982

Caltrans Peninsula Train (Southern Pacific)

The Caltrans Peninsula Train carried approximately 4,400 riders between 7 a.m. and 9 a.m. on weekdays in February, 1982, or 71% of capacity, based on a seated capacity of 6,200 passengers. Evening peak-hour trains (4 p.m. to 6 p.m.) carried about 4,800 passengers, or 73% of capacity, based on a seated capacity of 6,600. Cumulative downtown development (18 million sq. ft. of office space) would create a demand for 2500 additional trips. Caltrans would expand capacity as ridership expands but currently has no specific capacity expansion plans./9/

Golden Gate Transit

Buses serving Marin and Sonoma Counties now carry 10,000 peak-hour passengers at 90% of seated capacity. The increase of about 2,910 passenger-trips from cumulative downtown development would cause demand to exceed supply by about 29%./10/

During the peak hour, the Sausalito and Larkspur ferry routes have a combined seated capacity of 1,470 passengers and carry 1,100, or 75% of seated capacity. By 1984, the demand for peak-hour service would increase to 2,000, or 136% of seated capacity. Maximum allowed riderships on the Sausalito and Larkspur ferries are about 130 and 150% of seated capacity, respectively./10/ If some of the ferry service were discontinued, these trips would occur by bus or automobile. Golden Gate Transit plans to acquire 72 additional buses by 1985, capable of carrying a total of 3,530 seated passengers. This additional service would accommodate all projected growth in agency patronage and some reduction of ferry service.

RIDES for Bay Area Commuters

The number of persons riding in van pools to and from downtown San Francisco is approximately 4,000./11/ The RIDES program leases vans as needed for user groups. Funding, except for administrative costs, is entirely by users. The program also provides matching services for carpoolers.

PEDESTRIANS

During construction, sidewalks may be closed. A covered pedestrian walkway would be provided along the west side of New Montgomery St. and the north side of Mission St. as necessary.

Upon project completion, the net increase in pedestrian travel to or from the project site during the p.m. peak-hour would be about 340 person-trips. This estimate includes trips begun or completed on public transit or in automobiles parked off-site, and deletes trips made to the existing garage on site (about 70) and trips which would be made in automobiles from the proposed on-site garage (20). These trips would use the New Montgomery and Mission St. sidewalks, which have a capacity of about 10,000 trips per hour, increasing pedestrian traffic on the New Montgomery St. sidewalk to about 12% of capacity.

The cumulative effect of other new development at locations within 2,000 ft. of the site would be to increase pedestrian traffic about 30% above existing levels. This would add about 200 pedestrians to the Mission St. sidewalk, increasing volumes there to about 14% of capacity (see Table C-5, p. 125). The flow would become somewhat impeded, but individual pedestrians would retain some freedom to select walking speed and could avoid conflicts.

The project alone would not noticeably affect the operation of the crosswalks at the Mission / New Montgomery intersection, but the cumulative effect of development in the area would be to increase pedestrian traffic in the crosswalks across Mission St. to about 65% of capacity, from 50% of capacity.

The project would eliminate three existing curb cuts which now serve the garage on the site, and would increase use of the Aldrich Alley curb cut; the alley would be widened to 10 ft. curb-to-curb. The basement-level parking garage would generate about 70 vehicular trips through the curb cut across the New Montgomery St. sidewalk each day. Almost 15 would occur during the p.m. peak hour, or an average of one every four minutes. These vehicles, principally outbound during the p.m. peak hour, would be expected to clear the sidewalk at the end of the New Montgomery St. green phase of the signal at the

intersection with Mission St. At present, the queue of vehicles in the right-turn lane of the southbound approach of New Montgomery St. to Mission St. extends north of Aldrich, clearing out when the light turns green, except for one or two vehicles./12/ Vehicles exiting Aldrich onto New Montgomery St. would be stopped across the sidewalk for periods of up to one minute, the length of the signal cycle. Average delay would be roughly one-half minute, so that the sidewalk would be blocked about 10% of the time.

VEHICULAR TRAFFIC

Peak-hour vehicular traffic to and from the project site would decrease as the project would effect a net loss of about 75 parking spaces by demolition of the parking garage on the site. In the downtown area as a whole, it is also to be expected that the project would effect a small decrease in peak-hour vehicular traffic, because displaced parkers would not be able to find other parking downtown or would themselves displace others from automobile use as discussed at the beginning of this section.

The cumulative effect of development in the area would be to increase peak-hour vehicular traffic by about one percent per year. The net reduction in traffic through the Mission / New Montgomery intersection due to this project would be offset by the increase anticipated from other development in the area, so that operating conditions would remain substantially unchanged.

PARKING

The project would generate a demand for about 130 long-term parking spaces, and 30 short-term spaces./13/ An additional demand for a maximum of about 100 long-term parking spaces would be created by demolition of the existing parking garage. Twenty-three parking spaces would be provided in the basement of the proposed building.

The City's Planning Code does not require the provision of offstreet parking in any C-3 district. The 1977 "Revision to the Transportation Element of the

Master Plan Regarding Parking" (adopted by CPC Resolution 7647) discourages the provision of long-term parking spaces in the downtown core area where the site is located.

Access to the project garage would be via a ramp from Aldrich Alley; the ramp would be 10 ft. in width and about 75 ft. in length. Aldrich has a width (curb-to-curb) of seven ft., and a wall-to-wall width of about 12 ft. It would be widened to a (curb-to-curb) width of 10 ft. and a wall-to-wall width of about 14.5 ft. for the depth of the site. Vehicles inbound to the garage would enter Aldrich Alley from New Montgomery St. and proceed down the ramp via a lateral movement (see Figures 4 and 5, pp. 11 and 12). Outbound vehicles would exit onto New Montgomery St. by retracing the path of inbound vehicles. Both Aldrich Alley and the ramp would be too narrow to allow one vehicle to pass another. Use as long-term parking would reduce conflicts between inbound and outbound vehicles, caused by two-way operation of the one-lane ramp, and between vehicles and pedestrians in the curb cut. The applicant would determine the type of parking to be provided in consultation with the Department of City Planning and the Department of Public Works.

The total effect of the project would be to create a demand for 230 long-term spaces and 30 short-term spaces. The proposed garage would provide spaces to meet about 10% of the total demand. Through competition, many of the parkers from the project, and many of those displaced from the existing garage, would find spaces downtown, but in so doing would displace others to transit use, to parking in peripheral areas, or to ridesharing.

SERVICE VEHICLES

During construction, most trucks at the site would be too large to use Aldrich Alley. A temporary loading zone could be provided along New Montgomery St. which, when used, would block a certain length of the right-turn lane into Mission St. The queues of vehicles in the right-turn lane now extend during the p.m. peak hour to north of Aldrich Alley, clearing out on each green cycle except for one or two vehicles. Vehicles legally parked in front of the Call Building, on the west side of New Montgomery St. and north of Aldrich Alley, effectively limit use of the curb lane for turns to the segment south of Aldrich Alley. North of Aldrich, right-turning vehicles are sometimes queued

in the through lane. The temporary loading zone would further shorten the turning lane so that right-turning vehicles would remain in the through lane until within about three car lengths of Mission St. The other through lane on New Montgomery St. is also used for left turns. Because both turning movements are delayed by pedestrians in crosswalks, through movements would be significantly restricted, causing a significantly worsened service level at the intersection (from C to perhaps E) during the p.m. peak hour if construction vehicles were in the loading zone.

These problems could be avoided by locating the temporary loading zone on Mission St. Construction vehicles being maneuvered into and out of this space would sometimes impede bus traffic, and vehicular traffic from the right-turn lane of the southbound approach of New Montgomery St. to Mission St., in the outer westbound traffic lane of Mission St. Since the curb lane on Mission St. is not a traffic lane, even during the 4 - 6 p.m. period when a tow-away zone is in effect, the effect of construction loading activities there would not have the potential of causing traffic backups.

The project would have an enclosed loading space at grade, 52.5 ft. long, 12 ft. wide, and 12 ft. high, to be entered by a backing maneuver with lateral movement from Aldrich Alley (see Figure 20, p. 73). Available space would allow a maximum outer turning radius of about 25 ft. for each turn of the maneuver. In the geometric design of roadways, such turning radii are considered adequate for full-sized automobiles, and most light trucks and light vans having just two wheels per axle. Delivery vehicles would enter Aldrich Alley via a right turn from New Montgomery St. and exit Aldrich Alley via a left turn onto Annie St., which is one-way southbound and controlled by a stop sign at Mission St. (see Figure 20, p. 73). Trucks which have four wheels on an axle typically have a width (hub cap to hub cap) of 8 to 8.5 ft. These vehicles would not be able to use Aldrich Alley because its curb-to-curb width would continue to be only 7 ft., west of the site. Light trucks and vans which could use the loading docks would be able to make the left turn from Aldrich on to Annie St.

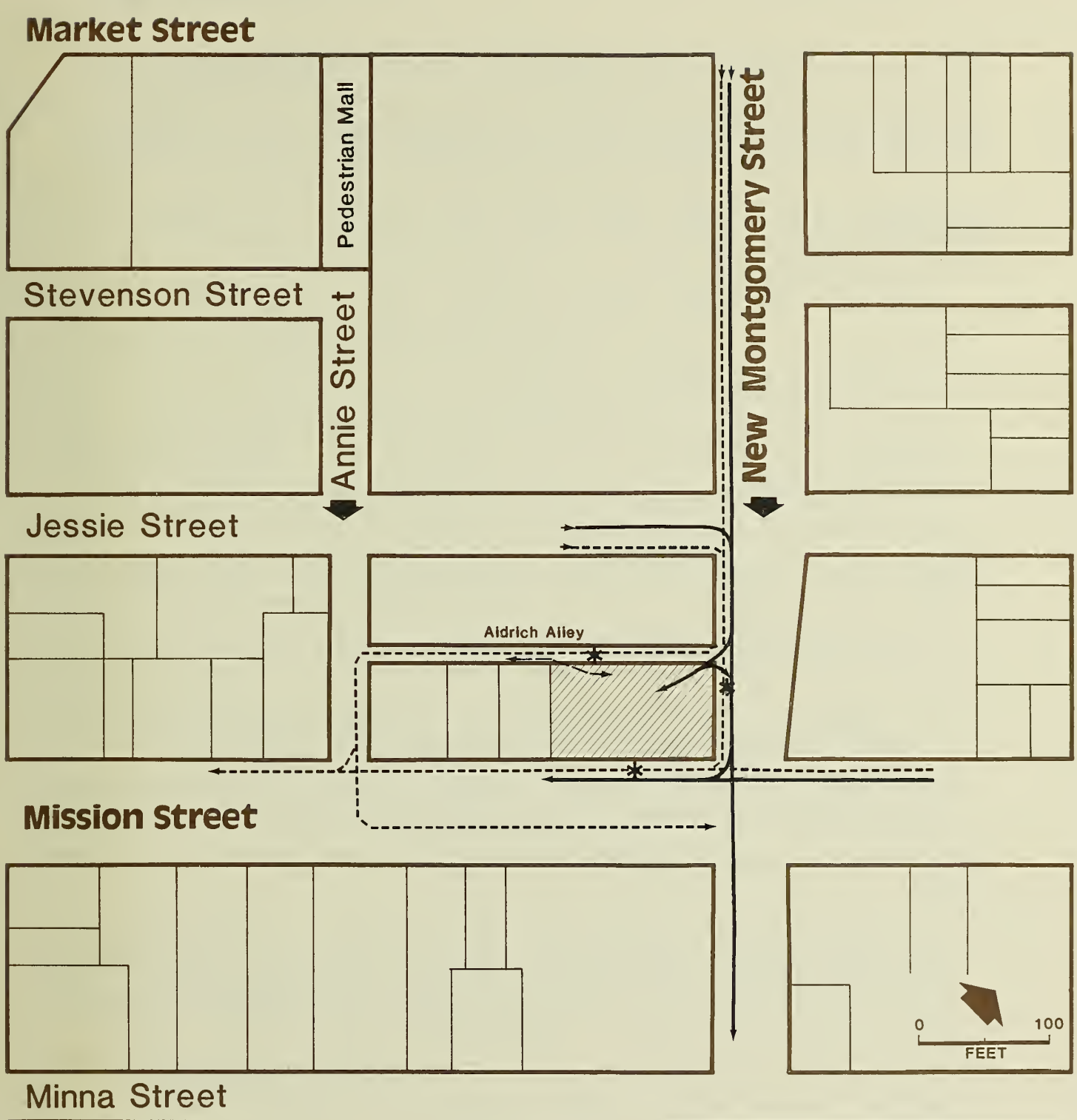


FIGURE 20: Automobile and Service Access to the Site

SOURCE: Environmental Science Associates, Inc.

The project would generate a demand for an additional loading space to accommodate the heavier trucks and vans which could not be accommodated in the Aldrich Alley loading dock. A curbside loading zone could be designated on Mission St., where a tow-away zone is in effect during peak hours. Parking maneuvers of large trucks would momentarily impede Muni operation in diamond lanes there.

Alternately, large trucks might use the curb lane on New Montgomery St. south of Aldrich Alley for loading. This lane of New Montgomery St. is currently designated by a red curb and lane markings as a right-turn lane. Use of this lane as a loading zone, if approved by the Department of Public Works, would increase the traffic volume on the two remaining lanes. During the evening peak hours, between 4 p.m. and 6 p.m., it is presumed that the right lane would be designated as a tow-away zone for use by right-turn traffic. Use of Aldrich Alley for on-street loading by the heavier trucks would impede traffic flow on New Montgomery St. during the maneuvering required for trucks to enter and leave the alley. To load or unload from the side, such trucks would line up so that their doors would be opposite the loading dock entrance. This would block access and/or egress at the loading dock during the time required for loading or unloading such trucks. It would also block any through traffic on Aldrich Alley. Trucks parking in Aldrich Alley to unload at the project site would also limit access to the sites along Aldrich Alley west of the project site if these sites were developed with loading facilities at a later date.

The single off-street loading space to be provided on Aldrich Alley would meet the City Planning Code requirements with respect to its dimensions and to the number of such spaces required. CPC Resolution 9286 states the intention of the Commission regarding requirements for loading spaces, and generally requires a greater number of spaces for office uses than does the Code. Applied to this building, the resolution would require one space, as proposed.

NOTES - Transportation

/1/ Modal splits and trip generation factors recommended by the Office of Environmental Review of the Department of City Planning, in "Attachment 1" of "Guidelines for Environmental Evaluation of Transportation Impacts" were

used. Peak-hour (person) trips would be generated at a rate of 3.5 trips per 1,000 sq. ft. of office space.

/2/ Modal shift projections contained in the Municipal Railway Five-Year Plan (1981-86) were used. These projections are consistent with an assumption that no new long-term parking will be provided downtown.

/3/ From Tables B, C, and D of "Major Development Proposals Under Construction or Active Review Within the Department of City Planning - October 1981." This listing was updated in Appendix C, Table C-6, p. 128 with information provided by Diane Oshima, Planner, Office of Environmental Review, April 13, 1982.

/4/ Municipal Railway Five-Year Plan (1981-86).

/5/ Tony Bruzzone, Muni Planner, telephone conversation, May 6, 1982.

/6/ Marty Birkenthal, Research Analyst for BART, telephone conversation, November 16, 1981.

/7/ Ted Reynolds, Senior Planner, AC Transit, telephone conversation, March 19, 1982.

/8/ George Kipp, Transportation Planner, San Mateo Transit District, telephone conversation, November 5, 1981.

/9/ Elmer Hall, Railroad Consultant, Caltrans, telephone conversation, April 22, 1982.

/10/ Allen Cahradnik, Senior Planner, Golden Gate Transit, telephone conversations, December 11, 1981 and March 29, 1982.

/11/ Frank Harris, Operations Manager, RIDES for Bay Area Commuters, Inc., telephone conversation, May 5, 1982.

/12/ From observations made by the consultant ESA on Monday, January 11, 1982.

/13/ Trip generation factors recommended by the Office of Environmental Review of the Department of City Planning, in "Attachment 1" of "Guidelines for Environmental Evaluation of Transportation Impacts" were used: 57% for work purpose (long-term parking), vehicle occupancy of 1.4, short-term parking turnover rate of four per ten-hour day.

D. OPERATIONAL AIR QUALITY

Project operation and related activities would affect air quality in two ways: emissions would be generated by project-related traffic and by combustion of natural gas for space and water heating. Daily emissions of pollutants resulting in 1985 from all project-related vehicular and stationary natural gas combustion were calculated and are shown in Table 4.

TABLE 4: PROJECTED DAILY PROJECT-GENERATED EMISSIONS IN 1985 (tons/day)

	Vehicular Fuel Combustion*	Natural Gas Combustion**	Total Project Emissions	1985 Projected Regional Emissions***
Carbon Monoxide	0.193	negligible	0.193	3,367
Hydrocarbons	0.017	negligible	0.017	797
Nitrogen Oxides	0.018	negligible	0.018	692
Sulfur Oxides	0.002	negligible	0.002	435
Particulate	0.003	negligible	0.021	192

*BAAQMD, 1981, EMFAC-6C Vehicular Emission Factors.
**U.S. EPA, 1977, Compilation of Air Pollutant Emission Factors, AP-42, Third Edition, p. 1.4-2. Negligible is less than 0.001 tons/day.
***Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1979, 1979 Bay Area Air Quality Plan, pp. 62-64. The region is the nine-County Bay Area Air Quality Management District.

SOURCE: Environmental Science Associates, Inc.

The project would result in the elimination of approximately 75 parking spaces, net. As discussed in Section IV.C., p. 63, the project would not have a significant net effect on area traffic volumes. Competition for parking spaces would become apparent in the future so any project-generated traffic would displace previous motorists. Therefore, the net effect of the project on traffic volumes cannot be reliably quantified. Curbside carbon monoxide (CO) analysis was carried out for worst-case meteorology and dispersion conditions for streets adjacent to and carrying project-generated traffic; the results are shown in Table 5.

Combustion of natural gas for space and water heating would generate negligible amounts of carbon monoxide, sulfur oxides, nitrogen oxides and particulates when compared to 1985 projected regional emissions.

In summary, implementation of the project would add to local and regional accumulations of CO, hydrocarbons and nitrogen oxides (the latter two being

TABLE 5: PROJECTED LOCAL CURBSIDE CARBON MONOXIDE IMPACTS*

Street	Averaging Time	Existing	1985**
Mission (west of New Montgomery)	1-hour	20.2 ppm	15.3 ppm
	8-hour	9.2 ***	6.9
New Montgomery (north of Mission)	1-hour	16.5	11.6
	8-hour	8.3	6.3

* Calculations were made for worst-case dispersion meteorology according to BAAPCD (now BAAQMD), 1975 Guidelines for Air Quality Impact Analysis of Projects, updated for EPA, EMFAC-6C motor vehicle emission rates, 1981.
** Projected 1985 traffic volumes include non-analyzed growth (1% per year), cumulative development and the project. Air quality improvements result from continuing introduction of autos with improved pollution control devices, and phasing out of older, more-polluting vehicles.
*** Underlined values are those exceeding the applicable standard (35 ppm for one hour, 9 ppm for eight hours).

SOURCE: Environmental Science Associates, Inc.

precursors of ozone), particulates, and sulfur oxides during adverse meteorological conditions, such as inversions. The Bay Area Air Quality Plan found that ozone would continue to be a problem, and that substantial reductions in hydrocarbon emissions would be necessary to attain and maintain the ozone standard in the Bay Area./1/ CO and particulates are also a problem on a local scale. Because the project would increase emissions of hydrocarbons, CO, and particulates, attainment of the standards would be impeded. The project would have no measurable impact on citywide or regional concentrations nor on the frequency of violations of the standards. Cumulative development, on the other hand, could increase ambient concentrations and the frequency of standard violations, but neither the project nor other developments in the project vicinity would conflict with the control strategies of the Bay Area Air Quality Plan.

NOTE - Air Quality

/1/ ABAG, BAAQMD, and the Metropolitan Transportation Commission (MTC), January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area, Environmental Management Plan.

E. CONSTRUCTION NOISE

As is typical of downtown San Francisco, the ambient noise of the site is determined primarily by vehicular traffic. Trucks, buses, automobiles, and emergency vehicles, as well as construction equipment, are the major contributors to the level of noise. The Environmental Protection Element of the Comprehensive Plan indicates an existing day-night average noise level (L_{dn})/1/ of 70 dBA/2/ on New Montgomery St. and 75 dBA on Mission St./3/

Project construction would occur in three stages: demolition, excavation and construction. Throughout the 18-month construction period trucks would visit the site, initially hauling away dirt and debris and then delivering building materials. These activities would be audible in the project vicinity and would represent distinct noise intrusions.

During construction each piece of powered equipment, other than impact tools, would have to comply with the San Francisco Noise Ordinance (Section 2907b) requirement of a sound level of not more than 80 dBA at 100 ft. If a second piece of equipment were to be used simultaneously with the first, the resultant noise level would be increased by 3 dBA, resulting in an 83 dBA noise level. The Noise Ordinance (Section 2908) also prohibits construction work at night from 8:00 p.m. to 7:00 a.m., if noise from such work exceeds the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works. During construction many types of equipment are used. Typical construction noise levels are shown in Table 6.

Buildings in the project vicinity sometimes require open windows for ventilation. Noise levels during construction (excavation and exterior finishing) would reach as high as 75 dBA inside the Call Building, 70 dBA inside the Rialto Building and the Crocker Bank Administrative Offices in the Crossley Building, and 60 dBA in the 650 Mission St. building. Noise levels of 70 to 75 dBA result in intermittent communication impairment, requiring raised voices at distances greater than two feet, and restrict telephone use to a marginal level./4/ Noise has also been associated with narrowing the focus of attention and therefore workers would also likely be distracted and their performance degraded.

TABLE 6: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET

Construction Phase	Duration of Phase	Average Noise Level
Ground Clearing	4 weeks	84 dBA
Excavation	None required	89
Foundations	7 weeks	78
Erection	12 weeks	87
Finishing	46 weeks	89

SOURCE: D.N. May, Ph.D., 1978, Handbook of Noise Assessment, Van Nostrand Reinhold Environmental Engineering Series, p. 211.

Noise is responsible for induction of a generalized stress reaction at levels far below those responsible for induction of hearing damage./5/ Dilation of pupils, increased pulse pressure and heart rate, and pulse volume changes (all signs of the general stress reaction), have been observed in humans exposed to noise levels of approximately 70 dBA./6/ General psychological distress produced by noise can add to overall stress and in this way contribute to the incidence of nonauditory disease./7/

The project would require three weeks of pile driving. The Noise Ordinance (Section 2907c) limits noise emissions from impact tools and equipment to 80 dBA at a distance of 100 ft. unless the Director of Public Works has approved intake and exhaust mufflers and shields or shrouds which provide maximum noise attenuation.

Conventional unmuffled and unshielded pile drivers emit noise levels of 100 to 110 dBA at a distance of 100 ft. each time the driver strikes the pile. The quietest impact pile driver measured by the City generated noise levels of 98 dBA at 50 ft., but is not always compatible with construction requirements./8/ Actual noise emissions are dependent upon soil characteristics and the type of piles. On the assumption that noise emissions

of 100 dBA at 100 ft. would occur, pile driving would be audible to people on the streets within 1,000 ft. of the project site, where not shielded by intervening buildings.

During pile driving, noise levels would reach as high as 85 dBA in the Call Building, 80 dBA in the Rialto Building and the Crocker Bank Administrative Offices, and 70 dBA with noticeable vibrations in the 650 Mission building. General stress reaction has been observed in humans exposed to brief sounds of 70 dBA./7/ Noise at these levels would require workers to close the windows or shout to communicate. Intermittent noises, such as pile-driving noise, reduce the perception of control over the environment. This loss of control frequently results in a depressed mood and depressed motivation./5/ Repeated impulse and intermittent sounds of high level appear more likely to disrupt performance than continuous or steady sounds of comparable level./4/

The Department of Public Works (DPW) analyzes pile driving impacts for every project. In commercial areas DPW frequently restricts pile driving to the hours between 1 p.m. and 9 p.m. All measures imposed by DPW are negotiable and are subject to revision during construction should circumstances require new action./8/

NOTES - Construction Noise

/1/ L_{dn}, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises. Noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise.

/2/ dBA is the measurement of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.

/3/ Department of City Planning, Environmental Protection Element of the Comprehensive (Master) Plan, September 1974, page 17.

/4/ National Institute for Occupational Safety and Health, Occupational Exposure to Noise, U.S. Department of Health, Education and Welfare, 1972.

/5/ Sheldon Cohen, et al., "Cardiovascular and Behavioral Effects of Community Noise", American Scientist, Volume 69, October 1981.

/6/ Bolt, Beranek and Newman, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, U.S. EPA, 1971.

/7/ The Central Institute for the Deaf, Effects of Noise on People, U.S. EPA, 1971.

/8/ Ray McDonald, Chief Building Inspector, Bureau of Building Inspection, Department of Public Works, telephone conversation, July 6, 1981.

F. ENERGY

The project site is served by Pacific Gas and Electric Company (PG&E), which supplies natural gas, electricity, and energy conservation assistance to its service area. PG&E obtains some of the electricity it supplies from renewable geothermal and hydroelectric sources. Coal, oil, natural gas, and nuclear fuels, all nonrenewable sources of energy, are used to generate most of the electricity PG&E provides. Operation and maintenance of the existing parking garage on the site is estimated to require annually a total of less than five billion British thermal units (Btu) of electricity, natural gas, and other energy resources./1/

Construction Energy Requirements

Removing the parking garage would require an unknown amount of energy for demolition and debris removal. Site development, fabrication and transportation of building materials, worker transportation, and building construction would require a total of about 237 billion Btu of gasoline, diesel fuel, natural gas, and electricity, based on a recent study of construction in the U.S./2/

Operational Energy Requirements

Electricity and natural gas for project operation would be provided by PG&E; PG&E's electricity and natural gas distribution systems in the site vicinity are adequate to serve the project./3,4/ PG&E would probably meet new electrical demand primarily through increased use of coal, oil, natural gas, and nuclear fuels. Cogeneration (i.e. production of electricity from waste

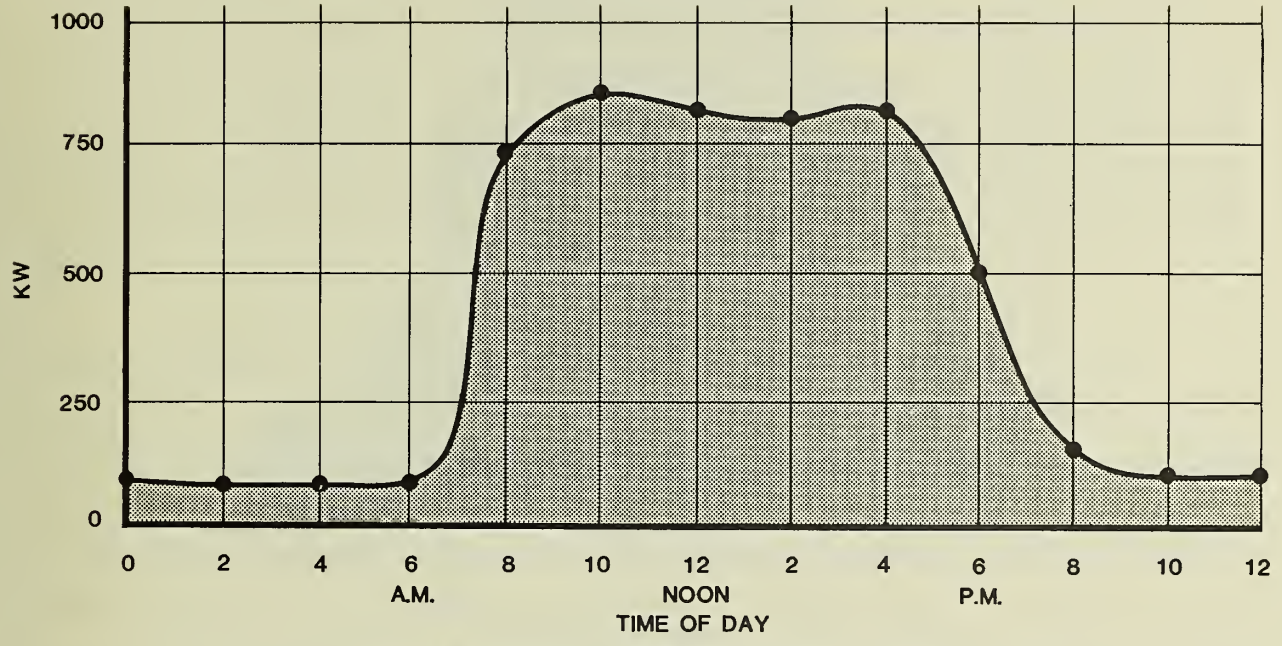
heat generated by industrial processes), wind turbine generators, and purchases of electricity from other utilities may also supply future electrical demand.

Electricity would be used by the project for lighting, air conditioning, ventilation, elevator operation, office equipment operation, and plumbing system pumping. Natural gas would be used to supply space and water heating via hot water boilers. Low-sulfur fuel oil would power the emergency generator and fire pump. The project would make no use of solar energy or other renewable energy resources.

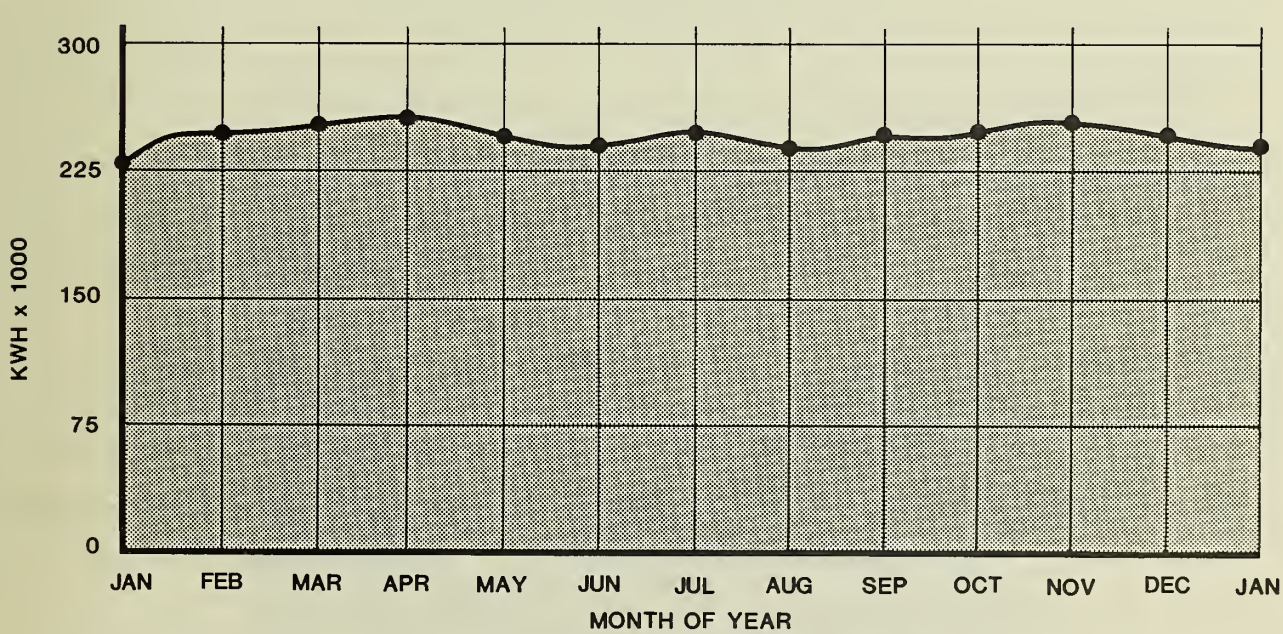
The project's connected kilowatt load would be about 1,175 kilowatts, and the project would consume about 2.9 million kilowatt-hours (kwh) of electricity annually, or about 241,000 kwh per month./5/ Peak electrical demand would be about 850 kw, and would occur between 8 a.m. and 5 p.m. in the spring and fall. Peak day electrical demand and annual electricity consumption curves for the project are given in Figure 21, p. 83.

The project would consume about 2.2 billion Btu (about 2 million cu. ft.) of natural gas annually, or about 187 million Btu per month./5/ Natural gas use would peak betwen 7:00 and 9:00 a.m. on January mornings as the hot water boilers begin heating the building. Peak day and annual natural gas consumption curves for the project are given in Figure 22, p. 84. The project's energy budget is similar to that of other office projects proposed recently for downtown San Francisco.

The project's estimated per-sq.-ft. electricity requirement, 1.7 kwh per month, is higher than an estimated average per-sq.-ft. requirement of 1.4 kwh per month estimated for 16 other proposed projects (see Appendix E, p. 131). The project's per-sq.-ft. natural gas requirement, 1,300 Btu per month, is less than 50% of an estimated average per-sq.-ft. requirement of 3,200 Btu for 16 other proposed projects. The project's total annual per-sq.-ft. energy requirement, 221,000 Btu, is close to the average of 212,000 Btu estimated for the other projects.



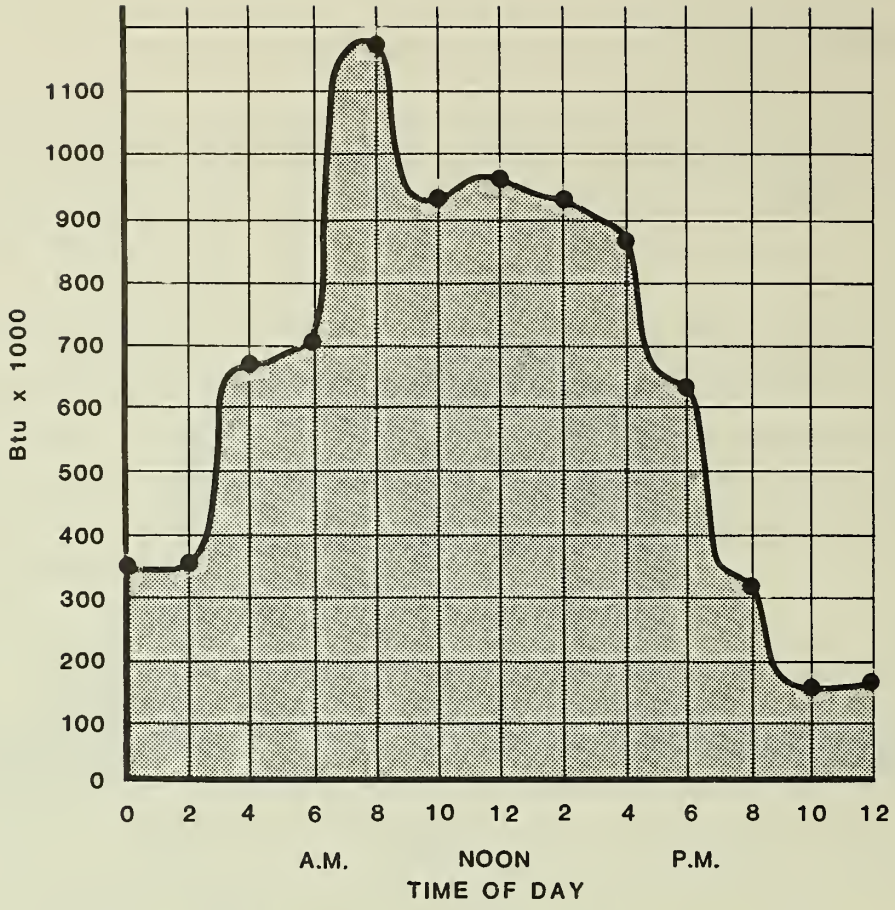
Daily Electrical Load Distribution (Peak Day)



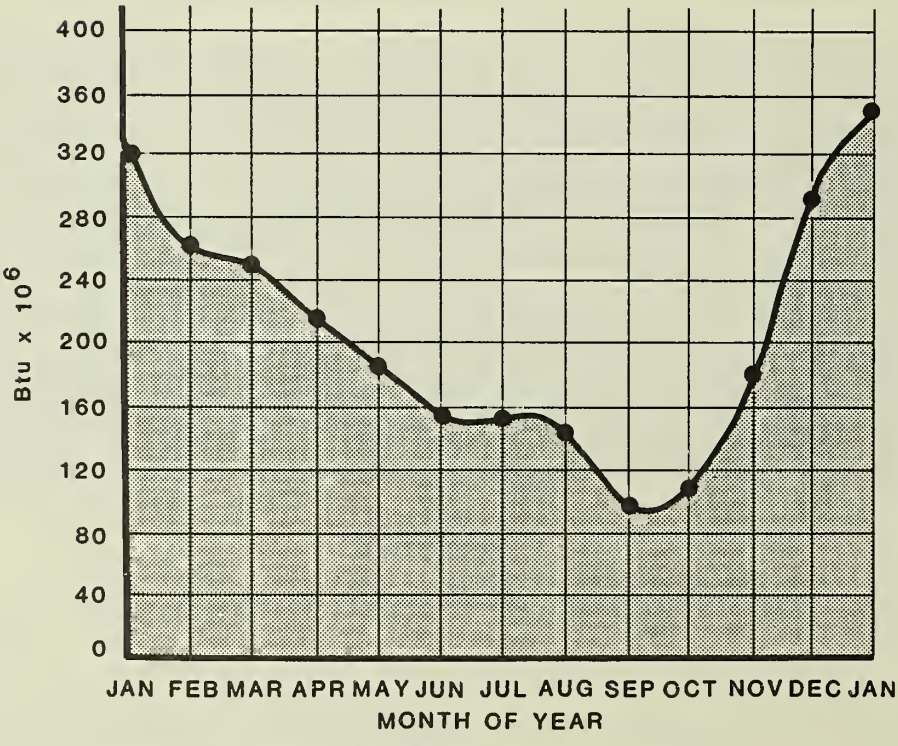
Annual Electrical Load Distribution Curve

SOURCE: Glumac and Associates

FIGURE 21: Projected Electrical Load Distribution Curves



Daily Natural Gas Load Distribution Curve
(For Peak Winter Design Day)



Annual Natural Gas Load Distribution Curve

SOURCE: Glumac and Associates **FIGURE 22: Projected Natural Gas Load Distribution Curves**

Several aspects of the project's energy system are not yet resolved, so a comparison of the project's energy budget with the building performance standards set by Title 24 of the California Administrative Code would be premature./6/ The project could comply with the requirements of Title 24 either by meeting prescriptive standards for insulation, weather stripping, glazing area, mechanical equipment efficiency, and other energy conservation measures, or by meeting the performance standards. The project is required by state law to be in compliance with Title 24 prior to the issuance of building permits.

Project-related transportation would cause additional, offsite energy consumption. Based upon the project trips described in the Transportation Section, project-related trips would require about 76,000 gallons of gasoline and diesel fuel and about 176,000 kwh of electricity annually. The total transportation demand, converted using at-source factors to a common unit, would be about 12.6 billion Btu.

Shadows from the project would decrease passive solar heating and daylighting of structures north of the project site, primarily the Call Building. In winter, about 1,500 to 2,500 sq. ft. of window area on the Call Building's southern facade would be shaded by the project (see Figures 13 through 18, pp. 38 - 50), possibly increasing the Call Building's heating requirements. During summer, the Call Building's air conditioning load could decrease somewhat because of shading by the project.

The project would shade the southern facades of the Sheraton Palace Hotel and buildings on the east side of New Montgomery St. between Jessie St. and Market St. for short periods on winter days. The net change in energy consumption of adjacent buildings due to project shadows is unknown, but is probably not substantial.

Cumulative increases in energy consumption in downtown San Francisco by approved and recently proposed projects would increase annual electricity consumption by more than 236 million kwh and would increase annual natural gas

consumption by more than 520 million cu. ft. Total increase in building energy demand would be about three trillion Btu annually, equivalent to about 500,000 barrels of oil per year.

NOTES - Energy

/1/ The British thermal unit (Btu) is a unit of heat energy equivalent to the quantity of heat required to raise the temperature of one pound of water at sea-level one degree Fahrenheit. All Btu values given in this section are at-source values, meaning that they have been adjusted to include the energy required for their generation and distribution, as specified in Energy Conservation and Design Manual for New Nonresidential Buildings, Energy Resource Conservation and Development Commission, 1977.

/2/ Hannon, B. et al., 1978, "Energy and Labor in the Construction Sector," Science 202: 837-847.

/3/ George Pavana, Pacific Gas and Electric Company; February 11, 1982; as reported to ESA by Dart Reinfort, Glumac and Associates, letter, February 16, 1982.

/4/ Jerry Tyson, Pacific Gas and Electric Company; February 11, 1982; as reported to ESA by Dart Reinfort, Glumac and Associates, letter, February 16, 1982.

/5/ No comprehensive building energy modeling was performed for the project. Natural gas and electricity loads for the project were estimated by the project engineers, Glumac and Associates, with data obtained from an existing building in San Francisco similar to the project in size, operating characteristics, mechanical equipment, and design features. These data were adjusted for differences in glass exposure, orientation, and shading. Building occupancy was assumed to be 26 days per month (natural gas) and 26 days per month (electricity); heating system efficiency was assumed to be 70%, lighting was assumed to be two watts per sq. ft., and wall receptacle loads were assumed to be 0.5 watts per sq. ft.

/6/ California Energy Commission, 1980, Conservation Division Regulations Establishing Energy Conservation Standards for New Nonresidential Buildings.

G. GEOLOGY, SEISMOLOGY, AND HYDROLOGY

GEOLOGY

The project would require little new excavation as the site has already been excavated to a depth of ten ft. for the existing basement. Additional excavations at the site would consist primarily of those necessary to install

pile caps, grade beams, and elevator shafts. It is expected that such excavations would be less than ten ft. below the basement level. If the excavation pit was not properly shored, the weight of oversize material could initiate lateral flows into the pit. Such flows could result in settling of nearby buildings.

Removal of unstable man-made fill may not be necessary if the building is supported on piles, as proposed. The piles would extend through the upper marine deposits into more-stable, denser sand and clay deposits. The exact depth of the piling tips and the size and capacity of individual piles would be determined following a detailed foundation investigation.

During site excavations, the removal of spoils could cause spillage of sand and silt in the streets along haul routes. This spillage could present an inconvenience and safety hazard for pedestrians, motorists and bicyclists. The dirt could also be a source of airborne dust, and sedimentation in affected storm drains.

Localized dewatering of the excavation pit may be necessary for some of the additional excavations depending on their depth, but would be expected to be negligible./1/ Should more extensive dewatering be necessary, it could cause settlement in the soils adjacent to the excavation, causing neighboring buildings which lack rigid footings to crack or lean out of plumb, and their floors to bend or tilt out of horizontal. Settlement could also cause cracks in adjacent streets or sidewalks, and could damage underground utility lines. Because of the potentially high costs of repairs associated with such damages, the Department of Public Works generally requires that a safety bond be posted before issuing an excavation permit.

SEISMOLOGY

Strong ground shaking during a major earthquake could damage the proposed office building, but would not be expected to cause its collapse. The building would be constructed with a moment-resisting frame on a pile foundation designed and constructed under the supervision of a structural and geotechnical engineer./2/ It would be designed to meet seismic standards of

the San Francisco Building Code and the Uniform Building Code. The swaying motion of the building during a major earthquake, particularly one of long duration, could topple bookcases, overturn furniture, or cause the collapse of heavy ceilings, light fixtures and unattached objects. Upper floors of the building could sway up to about 12 in.; this could result in falling and breaking glass which would present a hazard to pedestrian and vehicular traffic below. The parking structure currently on the site has no windows above street level and does not present a hazard from falling glass. Aluminum panels on the exterior of the building would be attached to structural frames and would probably not be damaged by this swaying motion.

If liquefaction, lateral landsliding, or rapid settlement were to occur in the vicinity, water mains, pipes, and underground utility lines could break, leaving the building without water, power, or telephone communications. Elevators could be rendered inoperable due to loss of power or damage to the elevator system. Local streets could buckle or crack due to lateral landsliding accompanying liquefaction or rapid settlement. Emergency water storage and pumping facilities would be incorporated into the building as required by City code.

HYDROLOGY

As with the existing structure, the proposed building would occupy the entire site; no change in surface runoff from the site would be expected. The project would have negligible impact on precipitation patterns in the area.

The proposed building design indicates that the basement would be about 10-15 ft. below ground level. This is expected to be above the groundwater table./3/ If the groundwater table is higher than anticipated, a small amount of dewatering could be required; however, experience with the present basement indicates that this would probably be unnecessary. It is not anticipated that a permanent subdrain system would be required beneath the building./3/

During construction, excavated material could be a source of siltation in storm drains; however, no effects on stormwater runoff quality are expected.

Because dewatering during construction would be very limited, it is expected to have negligible effects on stormwater runoff quality and storm sewer siltation.

NOTES - Geology, Seismology, and Hydrology

/1/ Richard Rogers, Engineer, Lee and Praszker, Geotechnical and Foundation Engineers, telephone conversation, February 16, 1982.

/2/ A moment-resisting frame emphasizes the strength of the connections between vertical columns and horizontal beams in order to resist lateral forces such as those created by earthquakes and high winds.

/3/ Lee and Praszker, Geotechnical and Foundation Engineers, February, 1982, Preliminary Geotechnical Investigation; proposed New Montgomery Street Office Building, San Francisco, California

H. EMERGENCY RESPONSE PLAN

The Mayor's Office of Emergency Services (OES) is preparing an emergency response plan to be implemented in the event of an earthquake or other emergency. The plan will identify roles and responsibilities of government agencies which would be involved in the event of a city emergency./1/ Included in this plan are a series of casualty and mass care centers that have been established on a district basis and would provide first aid and essential social services to injured and displaced persons (see Appendix G, p. 133 for the names and locations of these facilities).

Cumulative highrise development proposed for the downtown area would increase the total number of persons working downtown. This would result in a greater demand for medical care and social services in the area if a disaster were to occur. In addition, street congestion would probably intensify due to the increased number of people concentrated in the Financial District. This would interfere with the prompt response of emergency vehicles due to route delays and detours caused by crowded streets.

The effectiveness of the City's emergency response plan would therefore depend, in part, on an informed public's ability to know what to do and where

to go in the event of an emergency. The project sponsor has agreed to a mitigation measure which addresses this impact (see Section V. Mitigation Measures, p. 92).

NOTE - Emergency Response Plan

/1/ Tom Jenkin, Architect, Mayor's Office of Emergency Services, telephone conversation, January 12, 1982.

I. CULTURAL

"Although likely buried and/or disturbed during the past 200 years of historic construction, the possibility exists that prehistoric archaeological site deposits still remain below street level."/1/ If any artifacts were to be discovered during site preparation, the project sponsor has agreed to a mitigation measure to provide protection (see Section V. Mitigation Measures, p. 92).

The project site is on New Montgomery St., where several architecturally significant buildings are located./2/ Effects of the project on these buildings and the surrounding area are discussed in Section IV.A. Urban Design Factors, p. 30.

NOTES - Cultural

/1/ California Archaeological Site Survey, "Archaeological Records Search for 90 New Montgomery Street EIR in San Francisco," February 17, 1982.

/2/ Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors

J. GROWTH INDUCEMENT

The project would add about 124,300 gross sq. ft. of office space to the Financial District of San Francisco and remove an existing two-story parking garage. Employment at the site would increase by about 505 persons. Office occupants are unknown but could include tenants who would relocate from other

San Francisco locations, tenants who relocate from outside San Francisco, and new firms. The total increase in employment at the project site would not necessarily represent employment that is totally new to San Francisco.

The growth represented by the project would be in response to the continuing demand for office space in the Financial District of San Francisco. The project location reflects the trend toward meeting this demand south of Market St. This demand for office space continues the trend of growth in service sector and headquarters office activities and employment. This increase in office space and employment would contribute to continued growth of local and regional markets for goods, services and housing.

It is expected that many downtown workers would desire to live in San Francisco. However, increases in housing demand and City services would not correspond directly to employment growth, as some new jobs would be held by individuals who already live and work in the City, or who live in the City but who previously either did not work or worked outside the City, or by those who live in surrounding communities.

Any net increase in employment Downtown would increase the demand for retail goods and food services in the area. The project would intensify this demand, which would be met, at least in part, by retail space proposed to be incorporated in the project.

Increases in employment Downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services (see Section IV.B., Bay Area Employment Multiplier Effects and Construction Employment). In response, demand would increase for existing space and possibly for further new development.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE ADVERSE EFFECT OF THE PROJECT

HOUSING

MEASURE PROPOSED AS PART OF THE PROJECT

- On January 27, 1982, the project sponsor, Highfield Holdings, Inc., and California Jones Company entered into an agreement with the City and County of San Francisco (signed by Dean L. Macris, Director of Planning) relating to office building housing requirements. Of the 377 housing credits awarded to Highfield from this agreement, they will apply 112 to meet the housing demand generated by this project as calculated using the DCP formula.

TRANSPORTATION/CIRCULATION

MEASURES PROPOSED AS PART OF THE PROJECT

- Vehicle-activated visual signals (red and green lights) would be installed at both ends of the garage ramp, to prevent head-on conflicts between inbound and outbound vehicles on the one-lane ramp and to warn pedestrians on the sidewalk of the approach of outbound vehicles.

- The curb-to-curb width of Aldrich Alley would be increased to ten ft. for the length of the site to facilitate access to the enclosed loading dock. This would be done by the project sponsor pursuant to discussion (December 30, 1981) with the Department of Public Works.

- The project sponsor would submit a proposal to install a one-way sign at the west end of Aldrich Alley so that vehicles would not enter from Annie St. The project sponsor would pay for the installation of such a sign if approved by the Department of Public Works and the Board of Supervisors.

- The project sponsor would provide three parking spaces for bicycles, and one parking space for handicapped persons in order to decrease congestion caused by such persons (who may not have access to other modes of travel) searching for parking spaces.

- A transportation broker in the project management office would encourage transit use through the on-site sale of BART and Muni passes to employees, and by distributing transit information. The broker would provide a central clearinghouse for carpool information in cooperation with the non-profit RIDES for Bay Area commuters.

- The project would be designed to affix eyebolts to the building on the Mission St. facade for the suspension of Muni overhead trolley wires.

AIR QUALITY/CLIMATE

MEASURES PROPOSED AS PART OF THE PROJECT

- During excavation, unpaved demolition and construction areas would be sprinkled with water at least twice a day to reduce dust generation by about 50%.

- The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions.

- The general contractor would use water-based or latex paints on all interior drywalls painted, rather than oil-based paints, which emit hydrocarbons while drying. This would reduce hydrocarbons from drying paint by about 60%.

- During construction, drivers of trucks in loading or unloading queues would turn off their engines when not in use to reduce vehicle emissions, except for trucks delivering concrete.

NOISE

MEASURE PROPOSED AS PART OF THE PROJECT

- The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, where feasible.

MEASURE NOT INCLUDED AS PART OF THE PROJECT

- Holes for piles would be pre-augered, if possible, to reduce noise impacts. A decision would be made on the basis of the soils report, when completed.

UTILITIES AND PUBLIC SERVICES

MEASURES PROPOSED AS PART OF THE PROJECT

- The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.

- The project would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and the number of service trips to the site. Storage space for recyclable waste material containers would be provided for office use.

GEOLOGY, SEISMOLOGY, AND HYDROLOGY

MEASURES PROPOSED AS PART OF THE PROJECT

- A detailed foundation and geotechnical study has been conducted for the building by a licensed foundation and geotechnical consultant. The project sponsor would follow the recommendations of this study during the final design and construction of the project.

- The project would have a pile foundation, which would resist hazards such as liquefaction, subsidence, and unstable subsurface conditions (artificial fill). A pile foundation would also provide some measure of protection against seismic forces.

- Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Lagging and bracing of the existing basement would be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).

- Should dewatering be necessary, subsidence in surrounding buildings and streets would be monitored by the project sponsor to insure that damage is kept to a minimum. Dewatering would cease should excessive subsidence occur. If the adjacent structure to the west at 650 Mission St. is supported on wet wood piles, a method would be devised to keep the piles moist during construction.

- During construction, the project contractor would sweep streets to prevent siltation of storm drains.

- Windows would be installed so as to minimize the possibility of breakage during an earthquake, and to maximize the possibility that glass would fall inward, rather than outward, should windows break.

- Nonstructural elements of the building, such as hanging light fixtures, bookcases, ceiling and wall partitions, and mechanical equipment would be attached firmly in a manner to reduce the likelihood of their falling during an earthquake.

ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

- Wherever possible, office suites would be equipped with individual light switches, fluorescent lights, and other energy-saving devices as appropriate to conserve electric energy.

- Building heating, ventilation, and air-conditioning (HVAC) systems would be maintained by the building management at the lowest rates consistent with code requirements and industry standards to reduce heating and cooling loads.

- The project sponsor would install sun-control devices on the interiors of the windows to reduce solar heat gain.

- The project sponsor would install solar grey glass in windows to reduce solar heat gain.

- Elevators would use solid-state motor controllers to conserve energy when elevators are at rest.

- The project architect and project engineer would meet with the Bureau of Energy Conservation of the Public Utilities Commission during the design development phase of the project to discuss measures that could be taken to conserve energy.

MEASURES NOT INCLUDED AS PART OF THE PROJECT

- Within 18 months of full occupancy, the building operator could provide the Department of City Planning with monthly natural gas and electricity consumption data for a 12-month period. These data would then be adjusted for differences between the building's operation and Title 24-assumed operating conditions. If the resulting data were to show that the project's energy consumption exceeded Title 24 energy conservation standards, the building operator could have the building's energy performance audited by PG&E (or another certified contractor), and if economically feasible, cost-effective energy conservation measures could be implemented. This measure could be adopted by the project sponsor if an agreement with the City on the basis for determining cost-effectiveness of recommended conservation measures can be reached.

- The project sponsor has rejected the installation of a solar water heating system to reduce natural gas consumption. The rooftop area is too small to accommodate solar panels in addition to the ventilation louvres for the mechanical equipment.

- The project sponsor has rejected using PG&E's steam heating district because of its high operating costs compared to those of natural gas heating.

- The project sponsor has rejected the use of openable windows because they allow high air infiltration rates that increase heating and cooling loads, and because of the lack of adequate particulate filtration with this type of ventilation.

EMERGENCY RESPONSE PLAN

MEASURES PROPOSED AS PART OF THE PROJECT

- The project sponsor/building management staff would consult with the Office of Emergency Services (OES) in developing their plans to ensure coordination with the City's emergency response plan. The project plan would then be reviewed by the OES before issuance of the final occupancy permits by the Department of Public Works.

- The project sponsor would provide information to building occupants concerning what to do in the event of a disaster to expedite implementation of the City's emergency response plan.

MEASURES NOT INCLUDED AS PART OF THE PROJECT

- In cooperation with OES, the project sponsor would consider providing survival provisions, such as blankets and bottled water, on the site. A decision would be made after consultation with OES.

- An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's emergency plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final occupancy permits.

CULTURAL

MEASURES PROPOSED AS PART OF THE PROJECT

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

URBAN DESIGN FACTORS

Portions of the Call Building, the Sheraton Palace Hotel, and New Montgomery St. sidewalks that are unshaded under existing conditions would be shaded by the project. New shadow effects would occur principally from late October to late February during early morning hours.

TRANSPORTATION

The project would add directly about 215 person-trips on the Muni system during the p.m. peak hour. The loading dock and the parking garage would generate traffic in Aldrich Alley and increase pedestrian-vehicle conflicts on the New Montgomery St. sidewalk.

NOISE

Noise impacts during construction would result principally from pile driving.

ENERGY

The project would require an increase in natural gas and electrical energy use on the site.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

A. NO PROJECT

This alternative would entail no physical change to the project site as it now exists. The parking garage would remain, presumably in the same condition that exists in 1982.

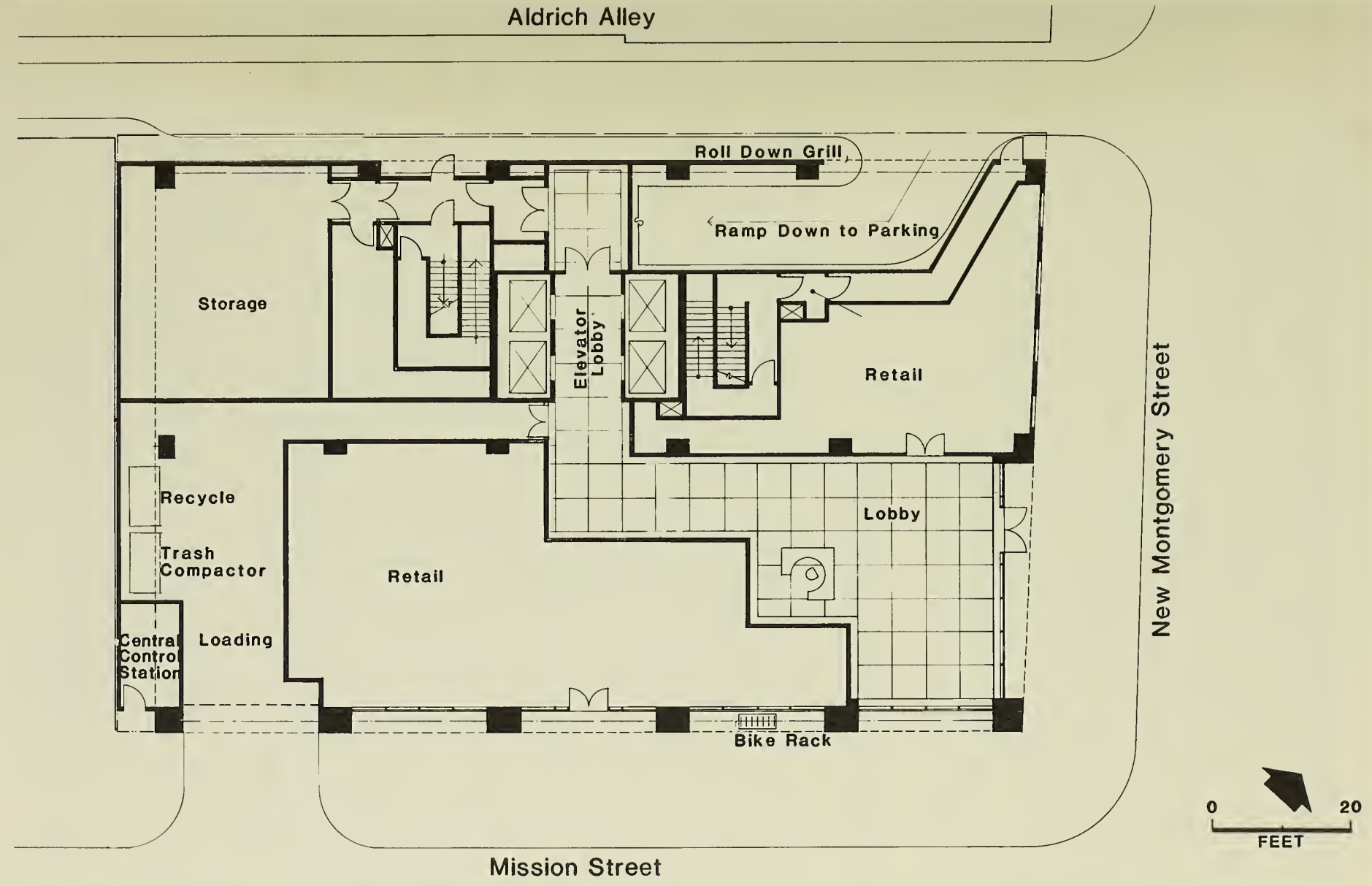
In general, the environmental characteristics of this alternative would remain substantially as described in Section III of this report. Present levels of traffic, parking demand, transit demand, air pollution, noise, energy consumption, on-site employment, and wind, shadow and visual effects now attributable to the building on the site would continue to exist.

This alternative would lessen employment-related effects identified in Section IV.B., p. 51, as approximately 505 fewer people would be employed at the project site than are proposed.

This alternative was rejected by the project sponsor because it would not fully utilize the potential usable space allowed at the site and would fail to provide a reasonable return on the investment potential of the site.

B. MISSION STREET LOADING DOCK ALTERNATIVE

This alternative would provide a loading dock with access from and egress to Mission St. (see Figure 23, p. 101). An enclosed dock, recessed about 37 ft. from the Mission St. property line, would be provided off Mission St. at the western side of the project. The 15-ft.-wide stall would be entered by a backing maneuver from Mission St., which would momentarily block vehicles in the diamond (transit vehicle) lane. The stall would be deep enough to accommodate the largest single-unit trucks.



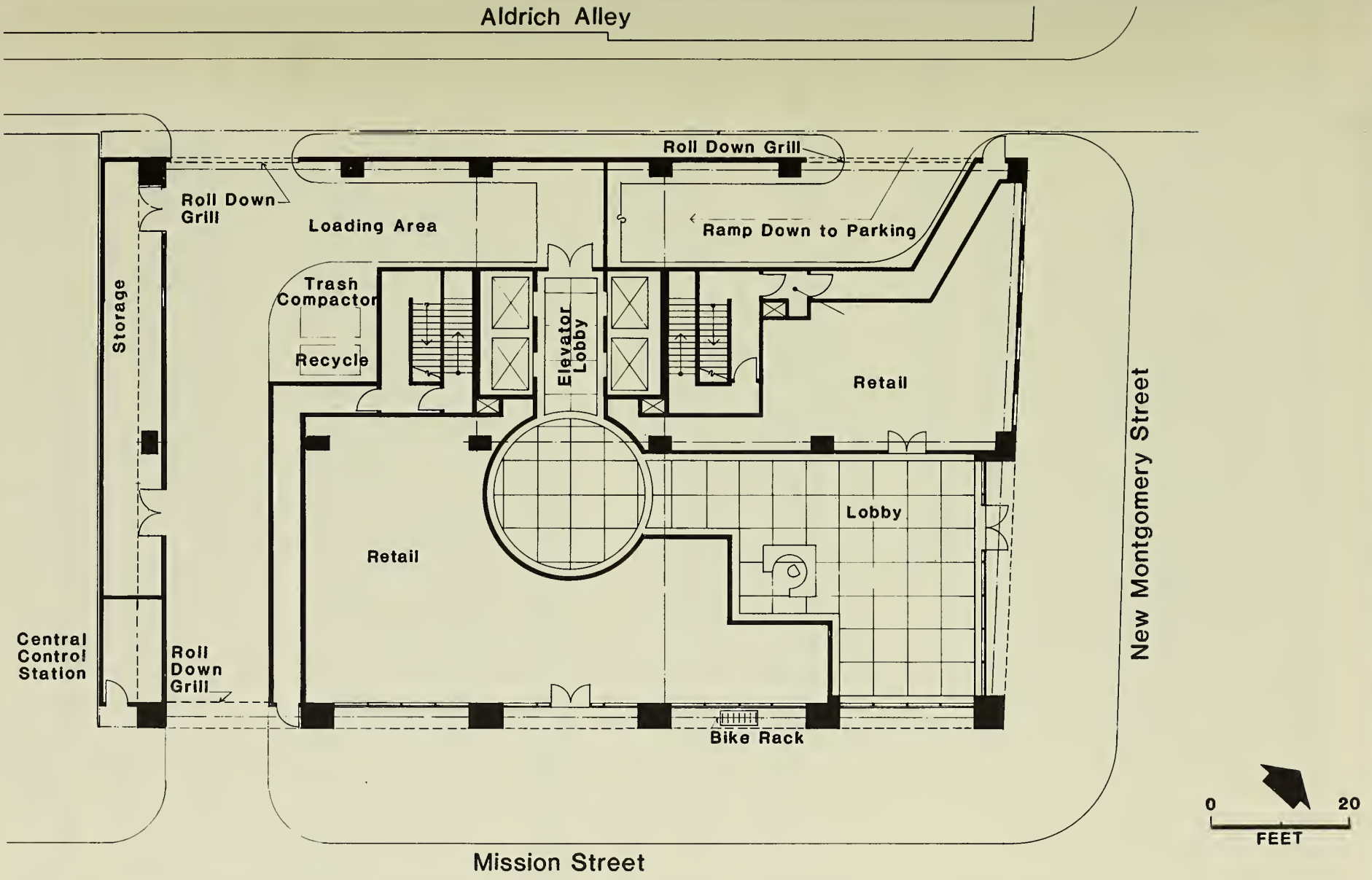
SOURCE: Gensler and Associates

FIGURE 23: Mission Street Loading Dock Alternative

This loading dock configuration would reduce traffic in Aldrich Alley as compared to the proposed project. There would be fewer potential pedestrian-vehicle conflicts because there are fewer pedestrians on Mission St. at this location than there are on New Montgomery St. The loading area could be made deeper to accommodate tractor-trailer rigs, but their maneuvering would block traffic lanes as well as transit lanes on Mission St. This alternative did not receive favorable comments from Department of City Planning transportation staff members because of its impact on transit and traffic operations on Mission St. and because of its conflict with the Transportation Element of the Master Plan which encourages access from minor alleys rather than major streets, especially transit streets. Because of this, the project sponsor rejected this alternative.

C. PASS-THROUGH LOADING DOCK ALTERNATIVE

This alternative would provide a loading dock with a pass-through driveway from Aldrich Alley, through the building, to Mission St. (see Figure 24, p. 103). Access to the enclosed loading stall would be made somewhat easier because some vehicles could be driven in from Aldrich "head first," avoiding the compound backing maneuver from the narrow 7.5-ft. section of Aldrich west of the site. Vehicles with an outer turning radius of about 25 ft., such as cars, light vans and light trucks, could make this approach to the loading area easily. The driveway through to Mission St. would have about a 13-ft. width and a 13-ft. curbcut at the exit across the Mission St. sidewalk. Mission St. pedestrian traffic is light at this location. Use of the driveway and access to the loading space could be controlled, as roll down grills would be provided at each end. Trucks such as cross-country moving vans, which would be too large to enter Aldrich Alley, could then be permitted to back in to the driveway from Mission St. With this alternative, conflicts between trucks and vehicles serving the project and Mission St. traffic, particularly in the transit lane, could be minimized, as compared to such conflicts resulting from the Mission St. loading dock alternative. The Master Plan encourages loading access from minor alleys such as Aldrich rather than thoroughfares, especially transit streets, such as Mission. Therefore, this alternative also conflicts with the Transportation Element of the Master Plan and did not receive favorable comments from the transportation staff members; consequently, it was rejected by the project sponsor.



SOURCE: Gensler and Associates

FIGURE 24: Pass-Through Loading Dock Alternative

D. NO-PARKING ALTERNATIVE

The No-Parking alternative would not provide the 23-space parking garage in the basement level of the proposed project. This alternative would reduce the number of vehicle trips to the site and would reduce project-induced vehicle-pedestrian conflicts at the Aldrich Alley curb cut on New Montgomery St. It would eliminate the need for the one-lane ramp into the basement area and the potential for vehicle-vehicle conflict on the ramp. It would eliminate the need for use of subsidewalk space by the project. (If subsidewalk space were not used, providing parking on the site would not be feasible.) It would increase the demand for parking spaces off site, and the demand on public transit. This alternative would discourage use of private autos for commuting to an area which is congested.

This alternative would be consistent with the Comprehensive Plan in that no long-term parking would be provided on the site.

As the area proposed for parking is currently used for parking, the project sponsor desires to continue such use. Therefore he has rejected this alternative.

E. HOUSING PROVIDED ON THE SITE ALTERNATIVE

Retaining the maximum office space provided by the project, up to 20 studio apartments could be added on two floors. This could be permitted as a conditional use based on bonus floor area of 10,000 sq. ft. for a second building entrance fronting on Mission St., approximately 2,500 sq. ft. for proximity to the Montgomery Station of the Market St. subway used by Muni and BART, and approximately 80 sq. ft. for widening of a part of the New Montgomery St. sidewalk. Five parking spaces would have to be allocated for the residential use at the required rate of one parking space for each four units in the C-3-O district. This alternative would add transportation, service, and energy impacts on the site engendered by up to 40 residents, assuming an occupancy of two persons per unit.

This alternative is considered by the project sponsor to be physically and economically infeasible as the small size of the site would preclude the

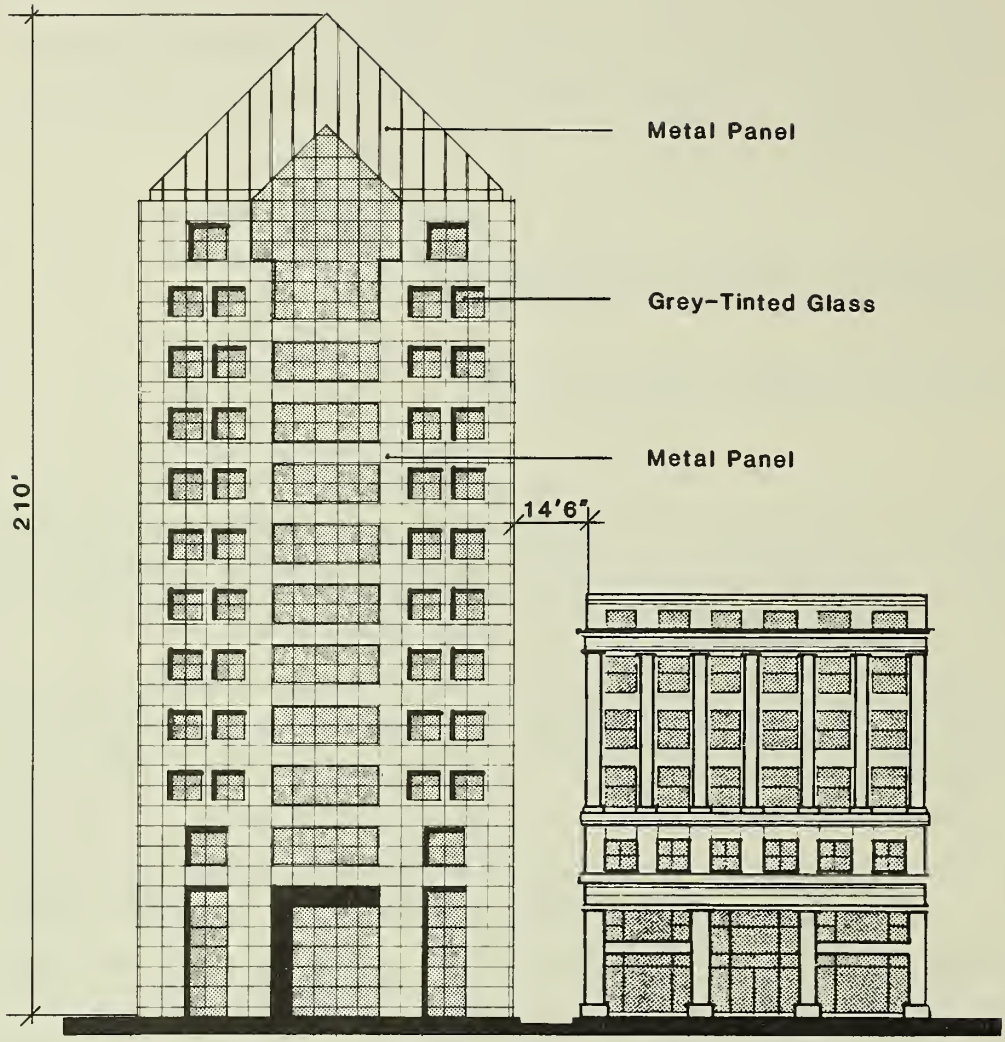
provision of a separate lobby and elevators for the apartments, and the number of floors to be served would be too limited for an efficient use of such services. Provision of required on-site open space (720 sq. ft.) and a required 30 ft. rear setback would result in small units. This alternative has been rejected by the sponsor as it is intended to provide housing elsewhere in the City in accordance with an agreement between the sponsor and the City, dated January 27, 1982.

F. GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE

1. OFFICE BUILDING WITHOUT HOUSING ON-SITE

This alternative would be a building designed to meet the criteria outlined in Guiding Downtown Development (GDD), published in May 1981 by the Department of City Planning. If the recommendations of GDD were adopted, the permitted FAR would be 12:1. An additional 0.5:1 FAR could be obtained for the provision of retail space on the street level. This would result in a total floor area of 122,500 gross sq. ft. A building covering all of the site for the first three floors (29,400 sq. ft.) and set back five ft. from the west property line at the upper levels could accommodate an additional 10 floors of 8,900 sq. ft. each. The resultant project would have 13 floors and 118,400 sq. ft. (see Figure 25, p. 106). As the FAR is the principal design constraint, the building height would be approximately 200 ft. where 500 ft. would otherwise be allowed. (An additional FAR of 3:1 could be gained by the transfer of development rights if a building of architectural or historical significance elsewhere in the C-3-O District were preserved. This has not been proposed by the project sponsor. If it were, however, it would result in an allowable FAR of 15.5:1 and would allow a building of 151,900 gross sq. ft. approximately 16 stories high.)

Parking might be provided as an accessory use in a manner similar to that in the project as proposed. Loading would be provided in a manner similar to that proposed for the project if the 12.5:1 FAR were used. (Two loading spaces would be required if the floor area bonus for the transfer of development rights were used.) Access would be from Mission St. to a private



SOURCE: Gensler and Associates

FIGURE 25: Guiding Downtown Development Alternative

service driveway, not less than 24 ft. in width, capable of handling trucks 40 ft. in length. This would require a different ground level design which would reduce the extent of retail space on the 9,800 sq. ft. ground level. As it is not anticipated that a transfer of development rights would be obtained for this project, the details of this two-dock alternative have not been designed by the project architect. Regulations proposed by GDD would give access preference to minor streets and alleys rather than to transit preferential streets.

Recreation and open space at the rate of one sq. ft. for each 25 gross sq. ft. of office space would have to be provided off-site at an undetermined location. Approximately 4,300 sq. ft. would be required for this purpose. Art work in the form of sculpture, paintings, mosaics, or tapestries would be provided in the lobby area in compliance with the requirement that such works of art costing one percent of the total construction costs be included. Bas-reliefs or mosaics might also be provided on the exterior of the building at the pedestrian level. One tree per 20 ft. of frontage would be provided on the sidewalk or setback. This requirement could be waived or modified by the Zoning Administrator if the trees would interfere with pedestrian or vehicular traffic or public utilities.

Because of the small size of the parcel, no setbacks would be required at the upper levels, and none would be provided except on the west side in order to provide windows. Required housing would be provided off-site.

A GDD-proposed amendment to Section 244.3 of the Planning Code would require the following feature applicable to this project:

> Street frontages of new buildings on sites immediately adjacent to significant and contributory buildings shall generally reflect the relative ratio of solid area to glazing, window proportions, important building lines and impression of weight and mass of the adjacent building structure, up to a height equivalent to the bases defined on the adjacent building.

Figure 25, p. 106, will aid in judging whether this provision would be met by the GDD alternative.

The building would be similar to the project as proposed but would be two stories lower and smaller by 13,000 sq. ft. Impacts identified for the project as proposed would be proportionately reduced.

2. OFFICE BUILDING WITH HOUSING ON-SITE

If the housing bonus floor area ratio of 5:1 were utilized, up to 60 units of housing, averaging 800 sq. ft., could be provided on-site in approximately five floors. This would result in a building of 18 or 19 stories. Shadow effects would increase. Provision of an apartment lobby and elevators would reduce the amount of retail space available on the street level. Provision of housing on-site has been rejected by the project sponsor for the reasons cited in Alternative E above.

G. HISTORIC BUILDING ALTERNATIVE

An Historic Alternative would be a structure the same height as the adjacent Call Building using precast concrete rather than metal panels, and a symmetrical deployment of the New Montgomery St. pedestrian-level features, including the entranceway on New Montgomery St. The building would be built up to the lot lines and contain about 9,800 sq. ft. per floor. It would provide retail uses, the building lobby, and the loading dock on the ground level; it would provide five levels of office space with a total of 49,000 gross sq. ft. The structure would be about 85 ft. high plus a mechanical penthouse.

It would eliminate new shadow effects on the Garden Court of the Sheraton Palace Hotel and reduce shadow effects on New Montgomery St. About 210 people would be employed at the site. It would reduce the effects resulting from the number of people employed at the site by approximately 60%.

This building would be more similar in size and appearance to its immediate post-Earthquake neighbors -- the Call Building and the Crossley Building on the opposite side of New Montgomery St., but less compatible with the 26-story

Telephone Building at 140 New Montgomery St. and the proposed highrise building to be known as One New Montgomery Place, if it is built.

This alternative has been rejected by the project sponsor since the objective of the project is to provide the maximum amount of office space which the site can accommodate and to make a reasonable return on the sponsor's investment.

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APPENDIX A: ARCHITECTURAL EVALUATION SURVEYS

The Architectural ratings discussed in the text of this report (see Section III.A., Urban Design Factors; Figure 9, p. 17) represent the results of two separate architectural surveys.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings which were entered in an unpublished 60-volume record of the inventory. The rated buildings have been represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The maps are available for public inspection at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was rated numerically according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best 2% of the City's architecture.

HERITAGE SURVEY

More recently, the Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the inventory results were published in the book Splendid Survivors. Criteria considered in rating the buildings include Architectural Significance and Negative Alterations. Summary ratings from "A" to "D" were then assigned to each building on the basis of these scores. The summary ratings indicate the following:

A. Highest Importance. Individually the most important buildings in downtown San Francisco. All "A" group buildings are eligible for the National Register and have highest priority for City landmark status.

B. Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. "B" group buildings may be eligible for the National Register. The Landmarks Preservation Advisory Board considers "B" buildings also to have highest priority for City landmark status.

C. Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. Many "C" group buildings may be eligible for the National Register as part of historic districts.

D. Minor or No Importance. Buildings which are insignificant examples of architecture. Most "D" group buildings are "sites of opportunity."

NOT RATED. Buildings which have been built or suffered insensitive exterior remodelings since 1945.

ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

On May 29, 1980, the City Planning Commission by Resolution No. 8600 adopted a list of architecturally and/or historically significant buildings in the Downtown area, based on the above described surveys. The purpose of the list is to advise developers and building owners of the importance the City places upon their conservation and to require special review by the Commission of any plans which would affect any building or buildings on such list.

TABLE B-1: MAJOR OFFICE BUILDING CONSTRUCTION AND CONVERSION IN SAN FRANCISCO AS OF NOVEMBER 1, 1981, IN GROSS SQUARE FEET

Year	Total Gross Sq. Ft. Completed	5-Year Total	5-Year Annual Average	Cumulative Total of All Office Buildings**	Cumulative Total of All Downtown Office Buildings***
Pre-1960				28,145,000	24,175,000
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)*	(516,000)*	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)*	(1,508,000)*	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)*	(1,550,000)*	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)*	(1,468,000)*	53,360,000	49,389,000
1980	1,284,000				
1981	3,138,000			57,340,000	53,369,000
Under Construction					
1982-1984	5,600,000	10,022,000	2,004,000		
1980-1984		(9,020,000)*	(1,804,000)*	62,380,000	58,409,000
Approved Projects	3,113,000			65,182,000	61,211,000

TABLE B-1: (continued)

*Net, which equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.

**Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data includes the area bounded by Vallejo, Franklin, Central Skyway, Bryant and The Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data includes the entire city.

*** Gross Floor Spaces for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.

SOURCE: Department of City Planning; Lu Blazej.

TABLE B-2: PROJECTED EFFECTS OF DOWNTOWN OFFICE DEVELOPMENT ON REGIONAL HOUSING MARKETS, 1980-85

	Residency of S.F. Office Employees*	Net Project Demand in 1985	Cumulative Demand 1979 to 1985**		Net Housing Stock Growth 1980-1985***	Project Demand as % of Growth 1980 to 1985****
	Percent	No. Households**	No. Emp.	No. Households	No. Units	Percent
San Francisco	40	110	15,700	8,700	5,000 to 8,000	1.4 to 2.2
Peninsula (San Mateo and Santa Clara Counties)	18	70	7,100	5,400	75,000	0.1
East Bay (Alameda and Contra Costa Counties)	30	115	11,800	9,100	41,000	0.3
North Bay (Marin and Sonoma Counties)	12	45	4,700	3,600	25,000	0.2
TOTAL	100	340	39,300	26,800	146,000 to 149,000	0.2

* Weighted average of expected employees in Federal Reserve Bank (EE 78.207), 101 California Street (EE 78.27), Pacific Gateway, (EE 78.61), and Crocker National Bank (EE 78.298), from 456 Montgomery Street Final EIR (EE 78.178), p. 167.

** Housing demand is based on the assumption that the housing requirement formula for new office development contained in "Office/Housing Production Program (OHPP) Interim Guidelines" (January 1982) reflects the actual demand for housing in San Francisco. The same formula was applied to the other counties except the number of workers per household is assumed to be 1.3 based on 1980 Census data. Cumulative demand is based on a list of projects available for public review at the Office of Environmental Review, 450 McAllister Street, 5th Floor, San Francisco, California.

*** San Francisco growth estimates are based on ABAG, January 1980, San Francisco Bay Area Housing Activity Report, Number 2, and on Mary Schlosser, Research Analyst, Population Research Unit, California Department of Finance, telephone conversation, August 13, 1980. Other housing market estimates are based solely on Department of Finance data. Growth rates are based on averaged rates (San Francisco 0.4%, Peninsula 2.2%, East Bay 1.2%, North Bay, 2.5%).

**** This column is based solely on the project's demand. Demand due to other office developments, immigration, and other regional housing demand factors would tend to further constrict the supply of regional housing available to households resulting from this project.

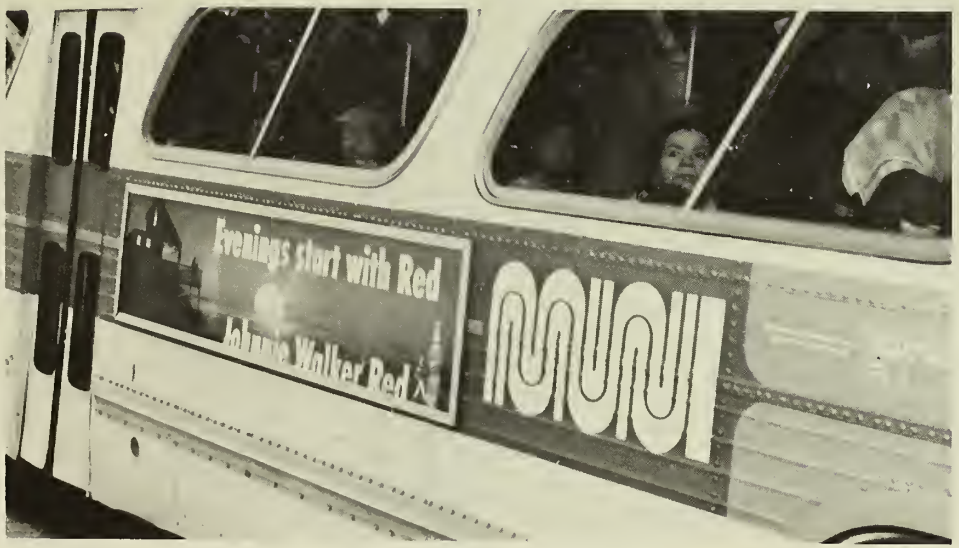
SOURCE: Environmental Science Associates, Inc.

K Ingleside - Van Ness Station

Wednesday, September 9, 1981 - 8:00 A.M. - Inbound

N Judah - Van Ness Station

Wednesday, September 16, 1981 - 5:00 P.M. - Outbound



38 Geary - Van Ness Ave. and O'Farrell St.

Wednesday, October 21, 1981 - 9:00 A.M. - Inbound

38 Geary - Van Ness Ave. and Geary Blvd.

Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

SOURCE: Environmental Science Associates, Inc.

FIGURE C-1: Photographs of Peak Muni Loading Conditions

TABLE C-2: EXISTING WORST P.M. PEAK-HOUR CONDITIONS ON OUTBOUND MUNI VEHICLES (Lines Passing Within 2,000 Feet of the Site)*

Lines	Condition
2, 3, 12, 14, 14X, 15, 38L, 45, 59, 60, 61	Passenger loading is more than 100% of the recommended maximum;** there is at least one standee for every two seated patrons. In the aisle, physical contact and conflicts are unavoidable. Crowding occurs at doors, delaying boarding or departure of patrons at some stops.
1, 1X, 11, 14GL, 30, 30X, 31X, 38, 38AX, 42, 80X, K, L, M, N	Passenger loading is 80-100% of the recommended maximum;** there are standees and seldom a vacant seat. In the aisle, standees do not touch each other but are uncomfortably close together on some lines. Movement in the aisle results in some physical contact when conflicts occur. Crowding occurs at doorways on some lines but seldom results in delays in boarding or departure.
4, 9, 17X, 27, 38BX, J	Passenger loading is less than 80% of the recommended maximum;** there are standees on some lines and a few vacant seats on others. In the aisle, patrons can avoid physical contact and conflicts, and there is no congestion at doors.

* This table is based on 1980 ridership counts by Muni, with estimated load factors incremented by 0.1 to reconcile them with conditions existing in 1982. The description of conditions for standing patrons is after Fruin, (Designing for Pedestrians) reviewed in English by Pushkarev and Zupan in Urban Space for Pedestrians, MIT Press, 1975.

** The recommended maximum is approximately 150% of seated capacity on buses and 220% on LRV's.

SOURCE: Environmental Science Associates, Inc.

TABLE C-3: VEHICULAR LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity* (v/c) Ratio
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00+

* Capacity is defined as Level of Service E.
Source: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering

TABLE C-4: PROJECT'S PEAK-HOUR TRAVEL BY MODE (PERSON TRIPS)

Mode	Percent	Trips
Auto	36	155 *
Muni	29	125 **
Bart	15	65
AC Transit	8	35
Golden GateTransit		
Buses	5	20
Ferry	1	5
Caltrans Peninsula Train	4	15
Samtrans	2	10
Other	3	10
TOTAL	103 ***	440

* 107 vehicle trips at an average occupancy of 1.4 persons.

** The total number of new transit trips due to the project would be greater, due to the displacement from automobile use of persons not associated with the project, through competition for limited available parking and freeway capacity. The estimated total for Muni is 215 person trips.

*** Exceeds 100% due to multi-mode trips, such as Muni transfers to BART, AC Transit, other regional transit systems.

TABLE C-5: PEDESTRIAN FLOW REGIMEN

Flow Regime	Walking Speed Choice	Conflicts	Flow Rate Average*	Flow Rate V/C
Open	Free Selection	None	0.5	0.03
Unimpeded	Some Selection	Minor	0.5- 2	0.03-0.11
Impeded	Some Selection	High Indirect	2- 6	0.11-0.33
Constrained	Some Restriction	Multiple	6-10	0.33-0.56
Crowded	Restricted	High Probability	10-14	0.56-0.77
Congested	All Reduced	Frequent	14-18	0.77-1.00
Jammed**	Shuffle Only	Unavoidable		

*P/F/M = Pedestrians per foot of effective sidewalk width per minute.
**For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

Note: Effective sidewalk width is the portion of the sidewalk which is actually used for passage. Studies of pedestrian behavior have found that pedestrians stay 1-1.5 feet away from curbs and building faces. Sidewalk obstructions also reduce the effective sidewalk width.

SOURCE: Pushkarev, Boris and Jeffry M. Zupan, Urban Space for Pedestrians, Cambridge, MA, MIT Press, 1975.

TABLE C-6: LIST OF PROJECTS PROPOSED, APPROVED, OR UNDER CONSTRUCTION, WITHIN 2000 FT. OF THE SITE TO BE COMPLETED BY 1984, INCLUDED IN THE CUMULATIVE ANALYSIS OF LOCAL VEHICULAR TRAFFIC, TRANSIT AND PEDESTRIAN EFFECTS

Assessor's Block	Project	Office Gross Sq.Ft.	Housing # Units	Hotel # Rooms	Status
256	897 California at Powell	0	30	0	proposed
258	N.W. corner Pine & Kearny	0	0	704	proposed
261	333 California	606,000	75	0	proposed
262	122 Battery	26,000	0	0	proposed
263	101 California	1,300,000	0	0	und. const.
265	388 Market	224,000	130	0	proposed
268	250 Montgomery at Pine	113,000	0	0	proposed
269	Russ Tower Addition	406,000	0	0	proposed
270	466 Bush	95,000	0	0	proposed
271	K.H. Plaza, 437-453 Grant	40,000	0	0	proposed
287	W & J Sloane, 216 Sutter	155,000	0	0	proposed
288	101 Montgomery	277,000	0	0	und. const.
288	333 Bush	585,000	50	0	proposed
289	One Sansome (Citicorp)	611,000	0	0	proposed
292	Crocker Bank	770,000	0	0	und. const.
311	San Francisco Federal	184,000	0	0	proposed
312	50 Grant	90,000	0	0	und. const.
3705	Pacific III Apparel Mart	332,000	0	0	approved
3707	90 New Montgomery	137,000	0	0	proposed
3707	One New Montgomery	333,000	191	0	proposed
3708	25 Jessie at Ecker	111,000	0	0	und. const.
3708	71 Stevenson at Ecker	346,000	0	0	proposed
3708	562 Mission at Anthony	540,000	0	0	proposed
3709	Central Plaza	334,000	0	0	proposed
3709	499 Market	280,000	0	0	proposed
3709	Five Fremont Center	743,000	0	0	und. const.
3719	301 Mission at Beale	262,000	50	0	proposed
3722	New Montgomery at Howard	113,000	0	0	proposed
3722	144 Second at Minna	50,000	0	0	proposed
3733	868 Folsom	65,000	0	0	proposed
3735	UCB Bank Expansion	62,000	0	0	proposed
3735	Gift Mart	340,000	0	0	und. const.
3738	315 Howard	389,000	0	0	approved
3749	Second and Folsom	754,000	0	0	proposed
TOTAL PROJECTS (SQUARE FEET)		10,600,000*	499	704	

* This total differs from Appendix B because this table includes proposed projects that have not been approved, within 2000 ft. of the project site.

SOURCE: Environmental Science Associates, Inc.

APPENDIX D: SAN FRANCISCO AIR POLLUTANT SUMMARY 1978-1980

STATIONS: 939 Ellis Street (1978-79) and 900 23rd Street (1980), San Francisco

POLLUTANT:	STANDARD	1978	1979	1980
OZONE (O_3) (Oxidant)				
1-hour concentration (ppm /a/)				
Highest hourly average	(0.10) /b/ 0.12 /c,d/	0.11	0.08	0.09
Number of standard excesses state		2	0	0
Expected Annual Excess (national) /d/		0.3	0.0	0.0
CARBON MONOXIDE (CO)				
1-hour concentration (ppm)				
Highest hourly average	35 /c/	17	20	10
Number of standard excesses		0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9 /c/	9.4	13.8	7.5
Number of standard excesses		1	1	0
NITROGEN DIOXIDE (NO_2)				
1-hour concentration (ppm)				
Highest hourly average	0.25 /b/	0.30	0.16	0.17
Number of standard excesses		4	0	0
SULFUR DIOXIDE (SO_2)				
24-hour concentration (ppm)				
Highest 24-hour average	0.05 /b/	0.024	0.034	0.018
Number of standard excesses/e,f/		0	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m^3 /g/)				
Highest 24-hour average	100 /b/	128	117	173
Number of standard excesses/f/		1	1	6
Annual concentration (ug/m^3)				
Annual Geometric Mean	60 /b/	42.6	42.0	52.1
Annual standard excess		No	No	No
LEAD				
Calendar quarter concentration (mg/m^3)				
Highest quarterly average	1.5 /c/	1.19	0.95	0.53
Number of standard excesses		0	0	0

APPENDIX D (continued)

/a/ ppm: parts per million.
/b/ California standard, not to be equaled or exceeded.
/c/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).
/d/ The national ozone standard was revised from 0.08 ppm to 0.12 ppm in January 1979 and is now expressed in terms of the Expected Annual Excess, a three-year average of annual excesses of the 0.12 ppm value.
/e/ The sulfur dioxide standard is considered to be exceeded only if there is a concurrent excess of the state ozone or suspended particulate standard at the same station. Otherwise, the national standard of 0.14 ppm applies.
/f/ Number of observed excess days (measurements taken once every six days).
/g/ ug/m^3: micrograms per cubic meter.

SOURCE: BAAQMD, Air Pollution in the Bay Area by Station and Contaminant; and CARB, California Air Quality Data.

APPENDIX E: PROJECTS INCLUDED IN COMPARATIVE ANALYSIS OF ENERGY CONSUMPTION (ESTIMATES OF ENERGY CONSUMPTION PER PROJECT)

Project	
101 Montgomery	456 Montgomery
Howard & Main	101 Mission
595 Market	Spear/Main
505 Sansome	Post/Kearny
180 Montgomery	135 Main
Golden Gateway	Pacific III
Pacific Gateway	Washington/Montgomery
Daon Building (Battery and Sacramento)	Bank of Canton

SOURCE: Environmental Science Associates, Inc.

APPENDIX F: TENTATIVE GEOLOGIC PROFILE OF SITE

Geologic Material	Approximate Elevation (Feet above or below S.F. Datum)
Artificial fill (sand and debris)	+14 to +4 (± 1)*
Dense windblown dune sands	+4 to -16 (± 1)
Marine clays and sands	-16 to -21 (± 1)
Dense to very dense sands	-21 to -71 (± 11)
Stiff marine clays and dense sands	-71 to -190 (± 11)
Surface of bedrock	below -190

* Variations in depth of each layer are shown in parentheses.

SOURCE: Lee and Praszker, Geotechnical and Foundation Engineers, February 1982, Preliminary Geotechnical Investigation, Proposed New Montgomery Street Office Building, San Francisco, California

APPENDIX G: EMERGENCY CARE FACILITIES

Centers for Casualty Care and Mass Care have been designated by the Mayor's Office of Emergency Services:

MASS CARE FACILITY A location such as a school, from which lodging, feeding, clothing, registration, welfare inquiry, first-aid and essential social services can be provided to disaster victims during the immediate post-disaster period. Operated by the Red Cross, Department of Social Services, School District, Park and Recreation Department, University of San Francisco, and Salvation Army.

CASUALTY CARE FACILITY May be either a Hospital with full capabilities for surgery, X-ray, laboratory, etc. for treating major injuries or may be a First Aid Station with lesser capabilities for treating less-severe injuries. These facilities are comprised of both private and public agencies.

The MASS CARE FACILITY closest to the project:

Potrero Hill Middle School, 655 DeHaro at 18th.

The CASUALTY CARE FACILITIES closest to the project:

San Francisco City Clinic, 250 4th Street.
South of Market Health Center, 551 Minna.

SOURCE: City & County of San Francisco Earthquake Response Plan
Mayor's Office of Emergency Services

APPENDIX H: INITIAL STUDY

The building design has been modified since preparation of the Initial Study. The project sponsor and the project architect have responded to concerns of the Department of Public Works about the functional design of the loading dock by widening the alley and reducing the footprint of the building. Other design changes have also been made in the plans.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING 100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102
(415) 552-1134

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: January 22, 1982*

Lead Agency: City and County of San Francisco, Department of City Planning
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Paul Rosetter **Tel:** (415) 552-1134

Project Title: 81.492E
90 New Montgomery Office Building

Project Sponsor: Highfield Development Colorado, Inc.
Project Contact Person: Peter Gordon Gensler and Associates

Project Address: 90 New Montgomery Street at Mission Street

Assessor's Block(s) and Lot(s): Assessor's Block 3707, Lot 16

City and County: San Francisco

Project Description: Demolish 2-story parking garage and construct a 15-story, 202-foot building containing a total of about 144,400 sq. ft., including approximately 127,800 sq. ft. of offices, 4,800 sq. ft. of retail space, and a 9,600 sq. ft. basement providing 25 parking spaces.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: February 1, 1982*.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a $35.00 filing fee.

*BECAUSE OF THE LATE MAILING OF THIS DOCUMENT, THE DEADLINE FOR APPEALING THIS DETERMINATION IS EXTENDED TO FEBRUARY 8, 1982.

Alec S. Bash, Environmental Review Officer

INITIAL STUDY
90 NEW MONTGOMERY OFFICE BUILDING
81.492E

PROJECT DESCRIPTION

Highfield Development Colorado, Inc. proposes to construct an office building with street-level retail uses at the northwest corner of the intersection of New Montgomery and Mission Sts. (see Figure 1). The site is currently used as a three-level parking garage and encompasses Lot 16 of Assessor's Block 3707. It is in the C-3-O (Downtown Office) Use District and the 500-I Height and Bulk District; permitted floor area ratio (FAR) for the site is 14:1.

The site is an irregular rectangle with frontages of approximately 80 ft. on New Montgomery St. and 115 ft. on Mission St., and is approximately 9,800 sq. ft. in area. It is bounded on the north by Aldrich Alley. This passageway is 12 ft. wide, including a seven-ft.-wide driveway with 2.5-ft.-wide sidewalks on both sides. With project implementation, the passageway between the two buildings would be widened to 14.5 ft. for the length of the site, including a ten-ft.-wide driveway and a two-ft.-wide sidewalk adjacent to the project.

The proposed 15-story building would be 240 ft. tall including the mechanical penthouse; it would contain approximately 144,400 gross sq. ft. of floor area, including one basement floor. The structure would be rectilinear in form (see Figures 2 and 3); design details for the base and the top of the building have not been finalized. The building exterior above ground level would consist of colored aluminum spandrel panels with tinted glass. Clear glass would be used on the main floor. The ground floor would contain approximately 4,770 gross sq. ft. of retail space, the lobby providing access to offices on the upper floors, and an off-street loading dock (see Figure 4). The basement would contain 9,565 sq. ft. of parking area and 810 sq. ft. of storage and mechanical equipment space (see Figure 5). Each of the upper 14 floors would contain about 9,125 gross sq. ft. for a total of 127,800 gross sq. ft. of office space. Approximately 520 people would be employed at the site.

Three pedestrian entrances would be located along the New Montgomery frontage of the building; two would provide access to the building lobby and one would provide access to the retail space located in the northeastern corner of the ground floor. Two pedestrian entrances along the Mission St. frontage would provide access to the retail space located in the western portion of the ground floor of the building. Retail space would have clear glass windows along the sidewalk; upper levels would have windows on all four sides.

From New Montgomery St. which is one-way southbound, cars would enter the parking garage in the basement via a one-lane ramp with access from Aldrich Alley, the one-lane street adjacent to the site on the north. When leaving the garage, cars would enter New Montgomery St. via the ramp and Aldrich Alley. There would be 25 parking spaces including one oversized space designated for handicapped persons. Parking space is currently provided in the existing basement including space under the public sidewalk along New Montgomery and Mission Sts.; this existing arrangement would be continued with the basement plan as proposed in the project.

A loading dock would be provided with access from Aldrich Alley. Pursuant to discussions with the Department of Public Works, the alley would be widened to facilitate access to the dock. To unload, trucks would turn right from New Montgomery St. onto Aldrich Alley, drive about 150 ft. down the passageway, and back into the loading dock area. For egress, the trucks would continue westward down Aldrich Alley, turn left onto Annie St., and right onto Mission St.

Project sponsor is Highfield Development Colorado, Inc., a subsidiary of Highfield Corporation Ltd., a Canadian corporation based in Vancouver, British Columbia. Project architects are Gensler and Associates, San Francisco, California.

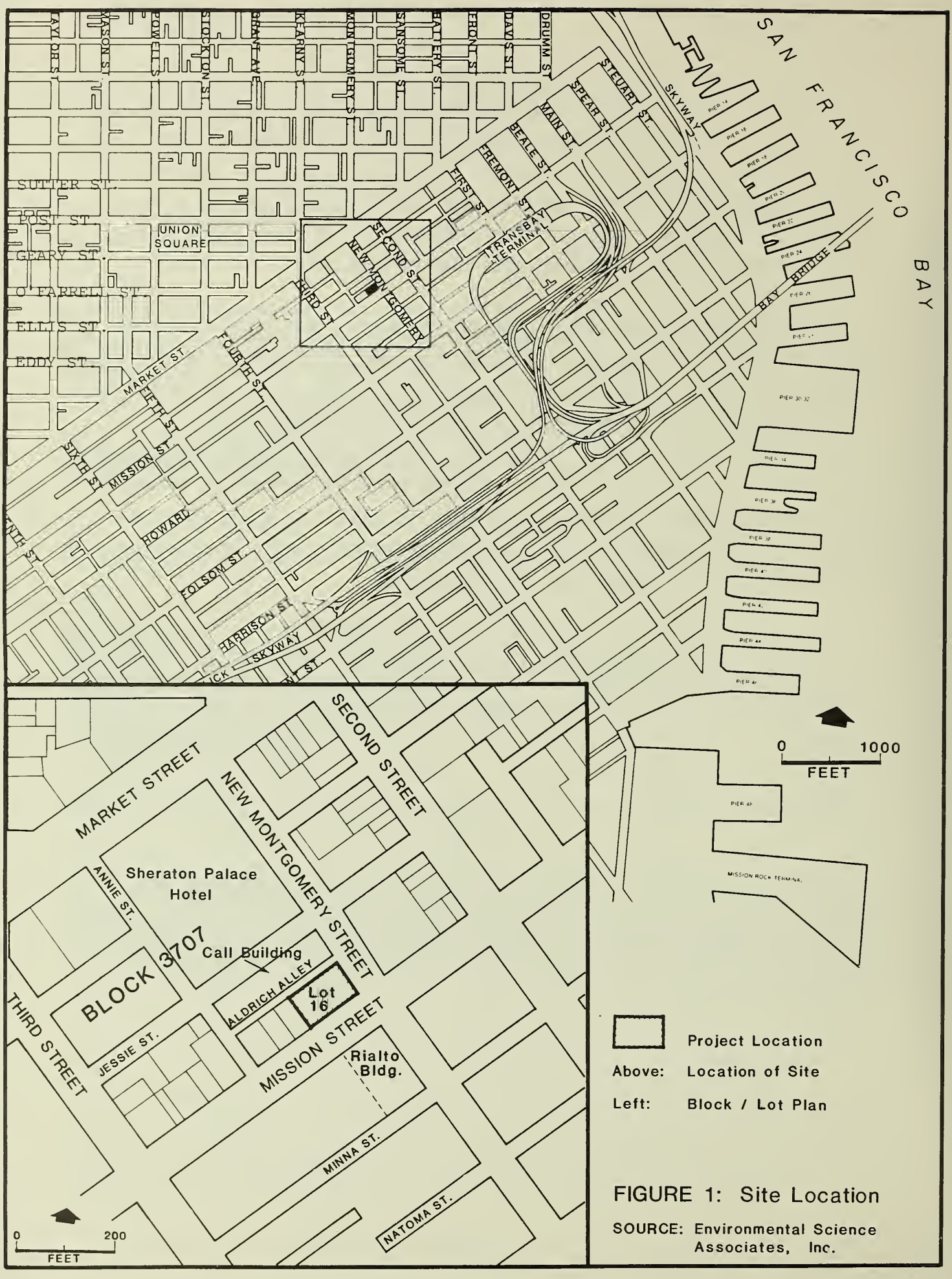
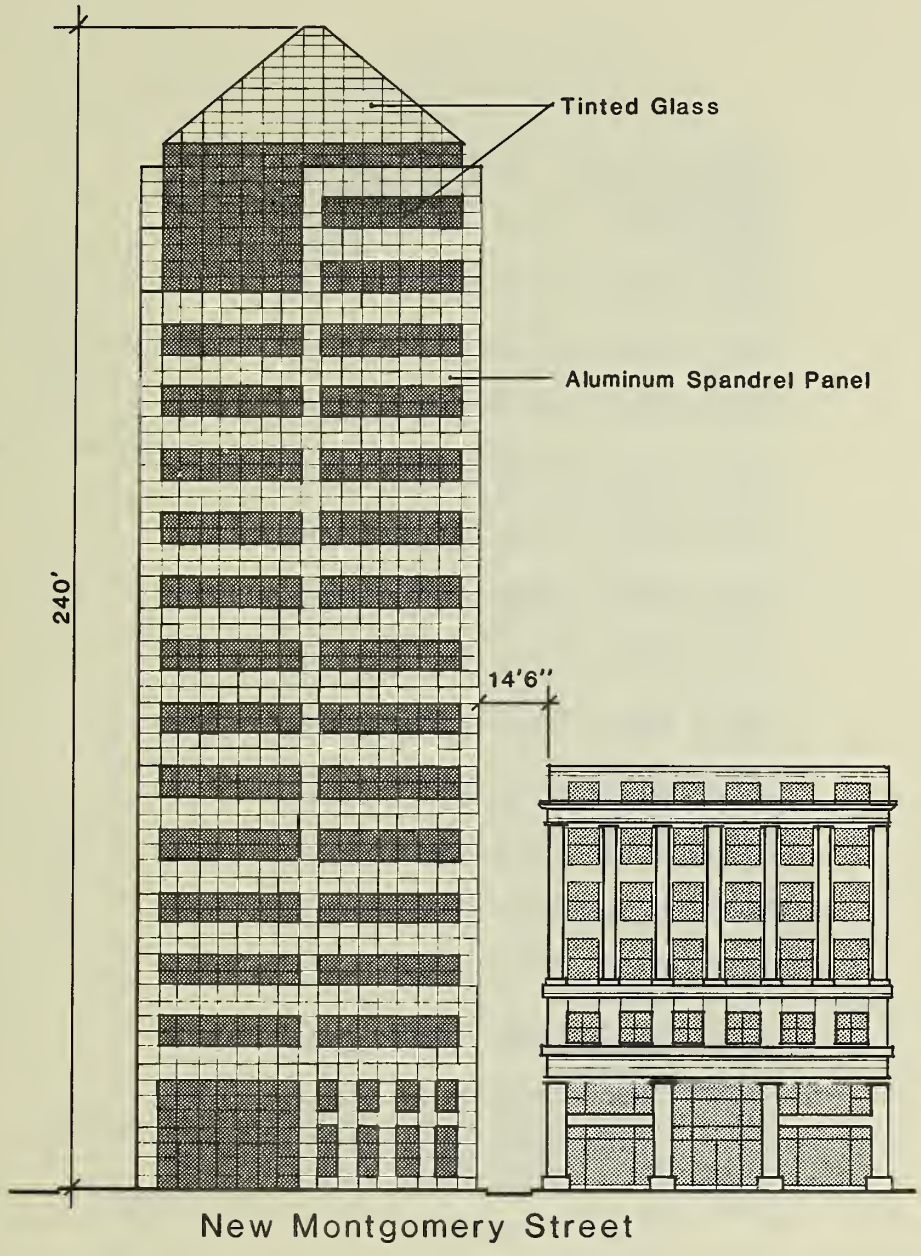


FIGURE 1: Site Location

SOURCE: Environmental Science Associates, Inc.



SOURCE: Gensler and Associates, Architects

FIGURE 2: East Elevation

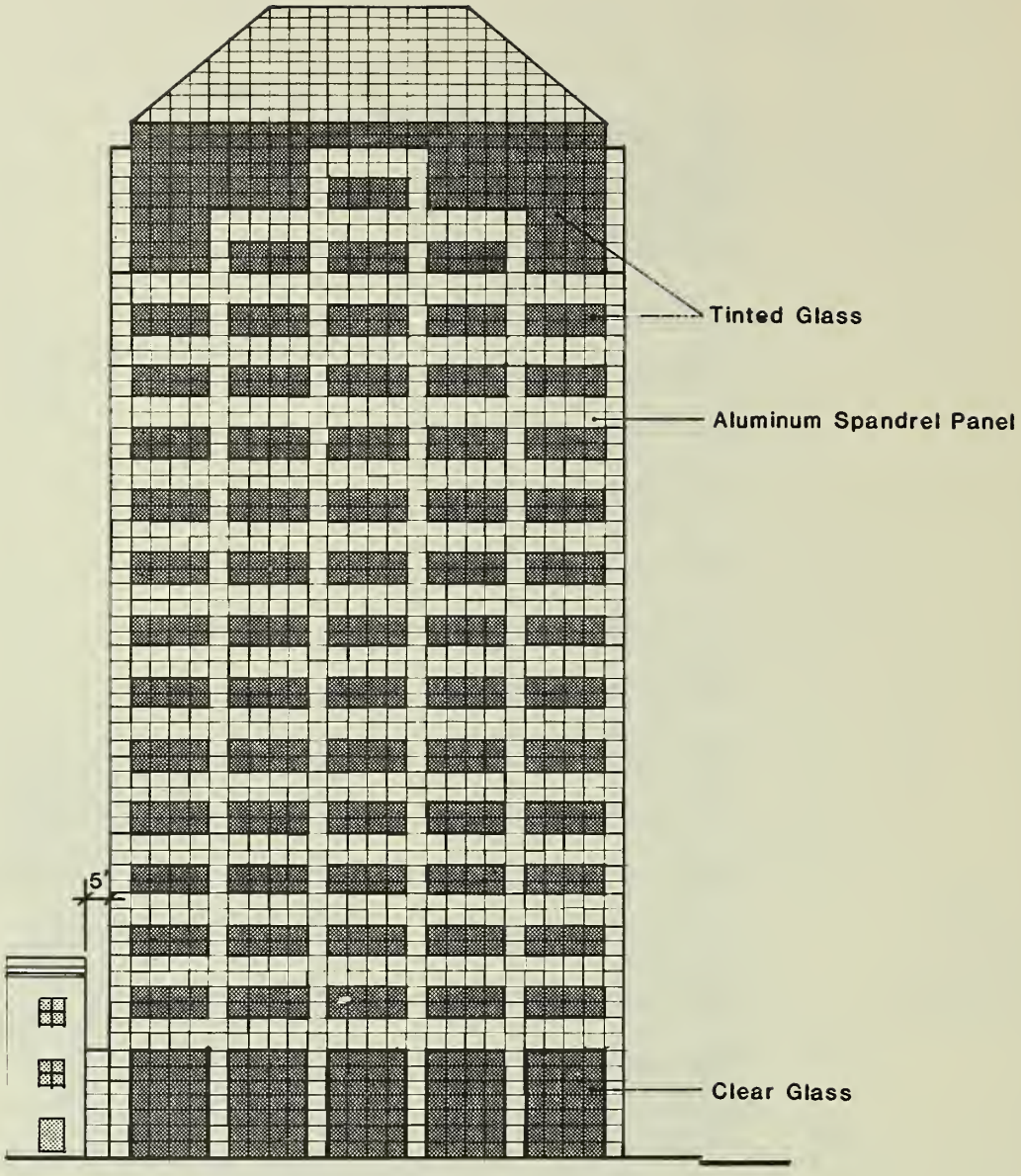
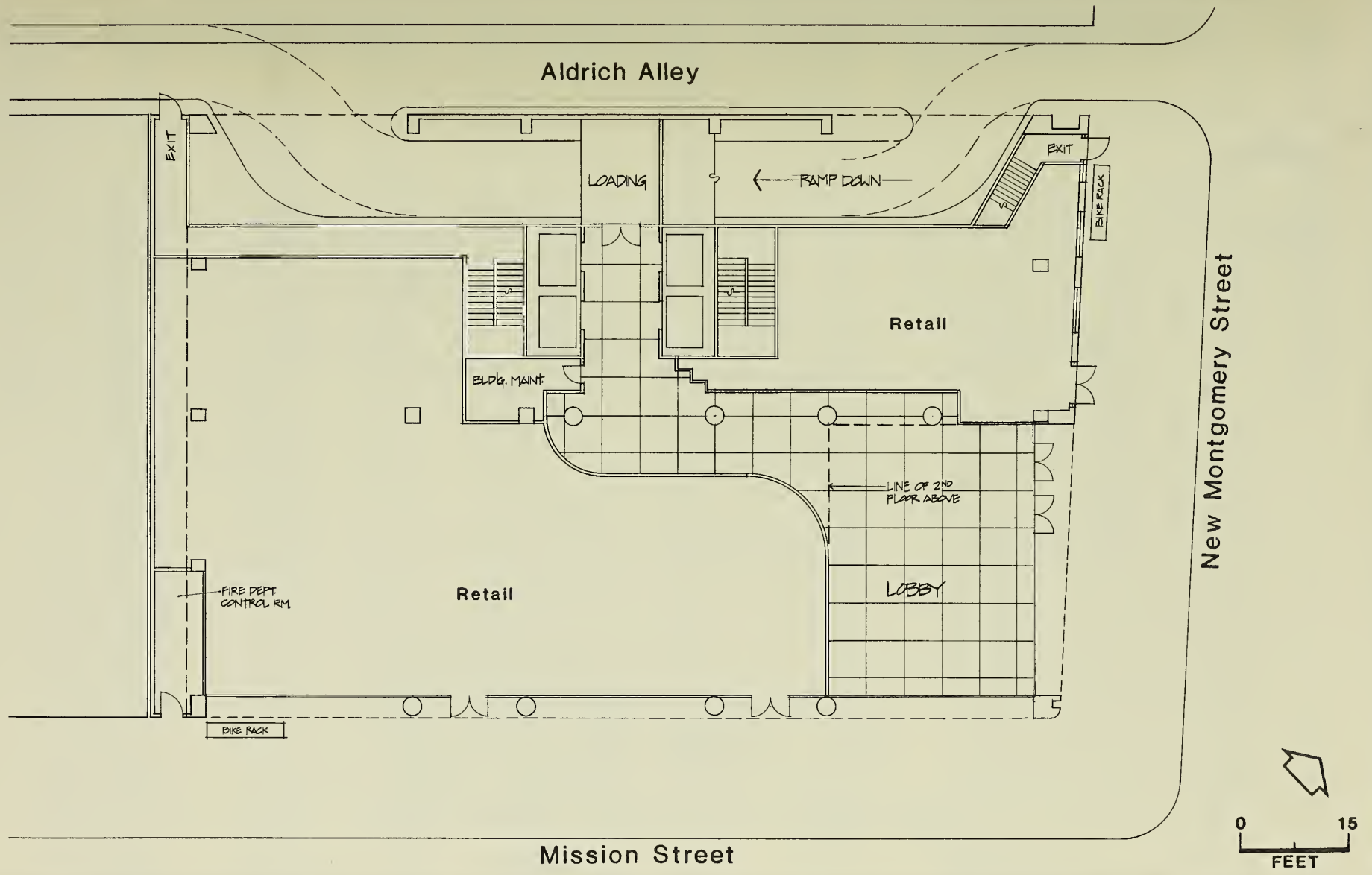


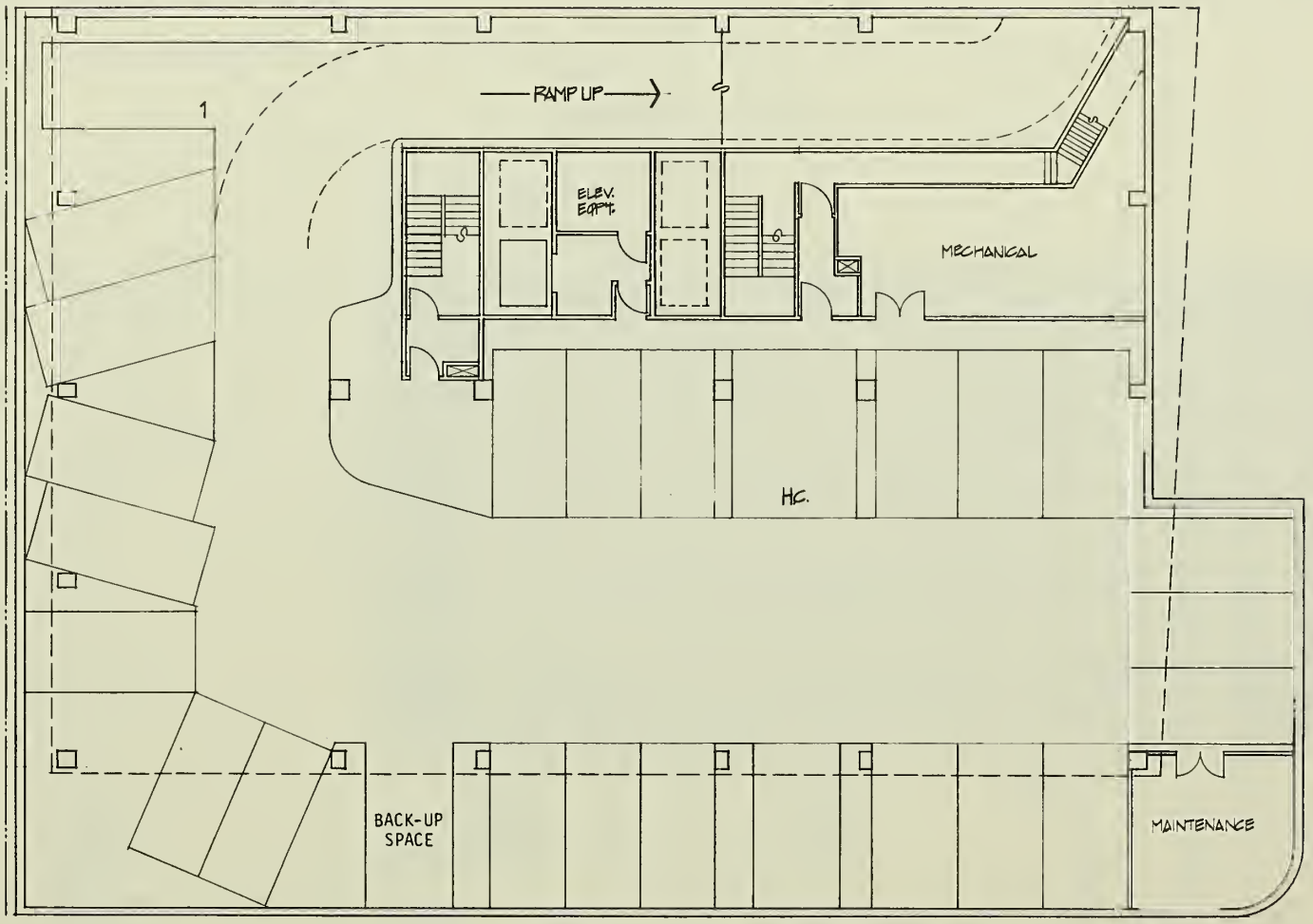
FIGURE 3: South Elevation

SOURCE: Gensler and Associates, Architects



SOURCE: Gensler and Associates, Architects

FIGURE 4: Ground Floor Plan



SOURCE: Gensler and Associates, Architects

FIGURE 5: Basement Plan

POTENTIAL ENVIRONMENTAL EFFECTS

Potential environmental effects resulting from the proposed project include provision of parking which does not comply with policies of the Comprehensive Plan; urban design aspects, including relationship to nearby historic buildings; increased housing demand generated by the project; effects on transportation and circulation; noise impacts of pile driving during construction; cumulative air quality impacts associated with project operation and project-generated traffic; possible shadow effects; subsurface geologic conditions; energy demand; impact on the City's emergency response plans; and archaeology. These issues will be analyzed further in an EIR which will be prepared for the project.

Potential environmental issues of the proposed project that have been determined in this Initial Study to be insignificant, and therefore will not be addressed in the EIR, are discussed below.

Land Use Compatibility: The project would be consistent with land uses in the vicinity of the site and in the C-3-O district.

Noise: After completion, project operation would not perceptibly increase noise levels in the project vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance and noise insulation measures contained in the Noise Guidelines of the San Francisco Comprehensive Plan.

Wind: The project does not appear to have the potential to create adverse ground-level wind impacts in areas with significant pedestrian traffic.

Utilities and Public Services: Increased demand for public services and utilities attributable to the project would not require additional personnel or equipment.

Biology: The project would have no direct effect on plant or animal life as the site is totally occupied by a structure.

Hazards: The site and the project would neither cause nor be affected by hazardous uses or health hazards.

A. GENERAL CONSIDERATIONS:

	Yes	Maybe	No	N/A	Disc.
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?	X				X
2. Would the project require a variance, or other special authorization under the City Planning Code?			X		
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal agencies?			X		X
4. Would the project conflict with adopted environmental plans and goals?			X		

The project, which provides office space in the Financial District, would be consistent with the specific statement in the City Planning Code describing the Downtown Office District (C-3-O) as "playing a leading national role in finance, corporate headquarters and service industries, and serving as an employment center for the region."

The project generally complies with provisions of the Comprehensive Plan. The project would comply with Objective 6 of the Commerce and Industry Element of the Comprehensive Plan to "maintain and improve San Francisco's position as a prime location for financial, administrative, corporate and professional activities" and Policy 2 of Objective 6 to "maintain a compact downtown core."

The project would provide retail space on the ground floor with pedestrian entrances on Mission and New Montgomery Sts. This would comply with Policy 4 of Objective 6 in the Downtown Retail Element of the Comprehensive Plan by "providing amenities for those who live, work and use downtown."

The project provides 25 parking spaces at the basement level which may be short-term or long-term parking. Policy 4 in the Transportation Element of the Comprehensive Plan discourages provision of any long-term parking facilities. The project would reduce the number of parking spaces within the

downtown core. The existing parking garage provides approximately 100 parking spaces, so project implementation would result in a net reduction of 75 spaces. One of the parking spaces would be designed for use by physically handicapped drivers; this would comply with Policy 2 of the Transportation Plan to provide "parking facilities within and adjacent to the downtown core...for vehicles driven or operated for the physically handicapped."

A request for continued use of the subsurface parking area would be included with the application for a building permit. The area under the sidewalks is a public right-of-way and may be used by the City at any time.

B. ENVIRONMENTAL IMPACTS:

1. Land Use. Would the proposed project:

	Yes	Maybe	No	N/A	Disc.
a. Be different from surrounding land uses?	___	___	X	___	X
b. Disrupt or divide the physical arrangement of an established community?	___	___	X	___	___

The project would provide 14 floors of office space with retail uses on the ground level. Most of the surrounding land uses on New Montgomery St. are office with some retail; uses along Mission St. are primarily retail. The Call Building to the north of the site and the Crossley Building directly across New Montgomery St. from the site are both used as office space by Crocker Bank. The Rialto Building, across Mission St. from the site, is an office building with ground floor retail uses. Retail establishments such as Guaranty Office Equipment are located west of the site along Mission St.

Uses proposed for the site are consistent with surrounding land uses; this topic will not be discussed in the EIR.

2. Visual Quality and Urban Design. Would the proposed project:

	Yes	Maybe	No	N/A	Disc.
a. Obstruct or degrade any scenic view or vista open to the public?	___	___	X	___	___

	Yes	Maybe	No	N/A	Disc.
b. Reduce or obstruct views from adjacent or nearby buildings?	X				X
c. Create a negative aesthetic effect?		X			X
d. Generate light or glare affecting other properties?			X		X

The project would not obstruct any scenic view or vista now available to the public.

The project would block or reduce pedestrian views across the site from the south side of Mission St.; these views include the southern side of the Call Building above the third floor and upper elevations of office towers located on Market St. Views of the Rialto Building across the site from the northeast along New Montgomery St. would be reduced by the project.

The project would block views to the south from the Call Building and views to the north from the Rialto Building. Mid-range views to the south from upper floors in the Sheraton Palace Hotel would be reduced by the project.

The building would contain no reflective glass or high-intensity lighting and hence would not impose a reflective or glaring light on other properties.

View blockages are not extensive and no generation of glare is proposed; these effects will not receive further discussion in the EIR.

The project would change the appearance of the site, which is part of the two-block New Montgomery St. section of the Financial District, by replacing a two-story parking garage with a 15-story building (see Environmental Impacts, Cultural p. 24). Because the facade and mass of the project are different from existing buildings, urban design aspects of the project and its relationship to other buildings in the vicinity will be discussed in the EIR.

3. Population/Employment/Housing.
Would the proposed project:

	Yes	Maybe	No	N/A	Disc.
a. Alter the density of the area population?	X				X

		Yes	Maybe	No	N/A	Disc.
b.	Have a growth-inducing effect?	___	X	___	___	X
c.	Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	X	___	___	___	X
d.	Create or eliminate jobs during construction and operation and maintenance of the project?	X	___	___	___	X
e.	Create an additional demand for housing in San Francisco?	X	___	___	___	X

The project would increase the number of daily employees on-site from approximately ten to approximately 520./1/ Approximately ten employees currently working in shifts at the parking garage would be displaced.

Under the formula currently used by the Department of City Planning, office uses in the project would be expected to generate a demand for approximately 112 housing units in San Francisco./2/

It can be expected that the project's estimated net 510 primary office and retail sector jobs would create an additional yet undetermined number of secondary jobs in the city's business services sector. This could have a growth-inducing effect of attracting new residents to the city.

Generation of housing demand and growth-induction will be discussed in the EIR.

NOTES - Population/Employment/Housing

/1/ Number of on-site employees estimated at the rates of: 1 employee per 250 sq. ft. of office space and 1 employee per 400 sq. ft. of retail space. Source: California Office of Planning and Research, January 1978, Economic Practices Manual, pp. 35-37.

/2/ Housing demand was calculated with the formula provided in a memorandum by Dean Macris, Director of Planning, July 20, 1981:

$$\frac{\text{Gross square feet of office space}}{\text{250 sq. ft. per employee}} \times 0.22 = \text{number of housing units required}$$

4. Transportation/Circulation.

Would the construction or operation of the project result in:	Yes	Maybe	No	N/A	Disc.
a. Change in use of existing transportation systems (transit, roadways, pedestrian ways, etc.)?	X				X
b. An increase in traffic which is substantial in relation to existing loads and street capacity?		X			X
c. Effects on existing parking facilities, or demand for new parking?	X				X
d. Alteration to current patterns of circulation or movement of people and/or goods?	X				X
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?		X			X
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?	X				X
g. Construction of new public roads?			X		

Increased employment at the site would impose increased demands on all existing public and private transportation, including Muni, BART, Golden Gate Transit, AC Transit, SamTrans, and the Southern Pacific RR. Project parking demands would not be met with on-site parking and would not be accommodated by existing parking near the project. Available parking would be reduced by 75 spaces. Aldrich Alley would be widened to a ten-ft. driveway to facilitate truck access to the loading dock. Project-related impacts and cumulative transportation/circulation impacts will be analyzed in the EIR.

5. Noise.

	Yes	Maybe	No	N/A	Disc.
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area? (during construction)	X				X
b. Would existing noise levels impact the proposed use?			X		
c. Are Title 25 Noise Insulation Standards applicable?			X		

Project Construction

Project construction would require approximately 18 months and would involve demolition of the existing garage, excavation, and construction of the proposed structure. Construction noise associated with site development would temporarily increase noise levels in the project vicinity. Persons in the offices and retail establishments located adjacent to the site would be the most sensitive receptors of construction noise. Temporary and intermittent noise impacts would result from the use of impact pile driving equipment which may be needed for foundation preparation. Exterior noise levels could reach 85 dBA at 50 ft.; interior noise levels at structures adjacent to the site could reach 71 dBA. Construction noise at these levels would interfere with normal speech.

The San Francisco Noise Ordinance limits noise emissions from powered construction equipment, with the exception of impact tools, to 80 dBA at a distance of 100 ft. The project contractor would adhere to this limit for all equipment, other than impact tools. Pile driving equipment does not comply with the provisions of the Noise Ordinance; a limitation of the hours of construction where such equipment is used may be required under the ordinance. The project sponsor has agreed to mitigation measures listed on p. 25 to reduce the effects of pile driving and other construction noise. Further consideration will be given to this issue in the EIR.

Project Operation

Typical of downtown San Francisco, the noise environment of the site is dominated by vehicular traffic noise. The Environmental Protection Element of the San Francisco Comprehensive Plan indicates a day-night average noise level (L_{dn}) of 70 dBA on New Montgomery and Mission Sts. adjacent to the site in 1974./1,2/ The Environmental Protection Element contains guidelines for determining the compatibility of various land uses with different noise environments. For office uses the guidelines recommend no special noise control measures in an exterior noise environment up to an L_{dn} of 70 dBA. For this noise level, the guidelines require an analysis of noise reduction

requirements and inclusion of noise insulation features in the building design. As this will be done by the project sponsor, no further analysis is needed in the EIR.

Project operation would not result in noise levels greater than those presently existing in the area. The amount of traffic generated by the project during any hour of the day, and cumulative traffic increases at the time of project completion, would cause traffic noise levels to increase by less than one dBA. To produce a detectable increase in environmental noise, a doubling of existing traffic volumes would be required; traffic increases of this magnitude would not occur with anticipated cumulative development.

Mechanical equipment noise is regulated by the San Francisco Noise Ordinance, San Francisco Municipal Code, Section 2909, "Fixed Source Noise Levels," which the project sponsor is committed to follow. The project site and surrounding area are zoned C-3-O. In this zone, the ordinance limits equipment noise levels at the property line to 70 dBA between 7 a.m. and 10 p.m. and 60 dBA between the hours of 10 p.m. and 7 a.m. During lulls in traffic, mechanical equipment generating 70 dBA would dominate the site noise environment. As equipment noise levels would be limited to 60 dBA to meet the nighttime limit, they would not be perceptible within the sound-level context of the project. Further discussion of operational noise will not be included in subsequent environmental documentation for the project.

NOTE - Noise

/1/ dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound.

/2/ L_{dn}, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises (noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise).

6. Air Quality/Climate.
Would the proposed project result in:

	Yes	Maybe	No	N/A	Disc.
a. Violation of any ambient air quality standard or contribution to an existing air quality violation?	X				X
b. Exposure of sensitive receptors to air pollutants?		X			X
c. Creation of objectionable odors?			X		
d. Burning of any materials including brush, trees, or construction materials?			X		
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	X				X

Concentrations of air pollutants in San Francisco are monitored by the Bay Area Air Quality Management District (BAAQMD) at 900 Twenty-third St., about two miles south of the site. Prior to 1980, a BAAQMD monitoring station was also located at Van Ness Ave. and Ellis St. Air quality data collected by the BAAQMD at both locations show that San Francisco experiences infrequent exceedances of the ambient air quality standards for ozone, carbon monoxide, and total suspended particulate.

Two types of air quality impacts could be expected from this project: short-term impacts from construction activity, and long-term impacts related to use and operation of the structure. Climatic conditions in downtown San Francisco allow rapid dispersal of air pollutants, so local stationary sources of emissions rarely create a measurable impact at monitoring stations. Rather, their impact is to add to regional accumulations of pollutants. Thus the project would probably not result in direct exceedance of any air quality standard, although it would contribute to existing exceedances.

Project Construction

Demolition, excavation, and construction activities would affect local air quality for approximately 18 months. Grading and other construction activities would cause a temporary increase in particulate and hydrocarbon emissions. These emissions would be carried by prevailing winds and probably would not cause emissions standards to be violated at the monitoring station. Without mitigation, construction-generated dust might cause exceedances of the particulate standard in the immediate project area. Dustfall may occur on surfaces within 200 to 800 ft. of the project site under low winds. Blowing dust may be an annoyance in the vicinity of the site when winds exceed 12 miles per hour. Construction dust is composed primarily of large particles that settle out of the atmosphere rapidly with increasing distance from the source. Thus it is more of a nuisance than a health hazard, except to sensitive receptors such as those with respiratory diseases.

Diesel powered construction equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulate. This would increase local concentrations temporarily but would not be expected to increase the frequency of exceedances of air quality standards. Pouring asphalt and applying certain architectural coatings would release hydrocarbons./1/ Although ambient concentrations of these pollutants would be increased for the duration of the construction period, no increases in measured concentrations at the Twenty-third St. monitoring station are expected to occur.

The project sponsor has agreed to the mitigation measures listed on p. 25; therefore, construction air quality impacts will not be discussed in the EIR.

Project Operation

Project operation and related activities, such as project-generated traffic, would incrementally degrade air quality and impede regional efforts to attain and maintain air quality standards. Combustion of natural gas for space and water heating would generate small amounts of pollutants in the project area. Electrical energy consumption would place an increased demand on local

generation plants, possibly resulting in greater emissions from these facilities. Further environmental documentation is necessary to determine the effect of project operation on roadside concentrations of carbon monoxide and regional emissions of pollutants, and on the frequency of violation of the standards; this will be discussed in the EIR.

Wind

West and northwest winds prevail in San Francisco; the project is moderately exposed to northwest and west winds above the level of the Call Building./2/ Aldrich Alley is so narrow that aerodynamically, with northwest winds, the Call Building and the project would act as one structure, and wind accelerations would occur above ground level along the narrow eastern and western faces of the building. A westerly wind would accelerate moderately as it passes through Aldrich Alley, which is seldom used by pedestrians. Pedestrians along New Montgomery St. would experience higher winds as they passed Aldrich Alley, but friction along the relatively narrow 14.5-ft. passageway would limit the severity of the wind acceleration./3/ Pedestrian areas adjacent to the building along Mission St. would experience generally lighter winds due to the shelter offered by the building. The project does not appear to have the potential to create adverse ground-level wind impacts in areas with significant pedestrian traffic; therefore no further analysis is necessary./2/

Shadows

The project would cast new shadows on the Call Building, the Sheraton Palace Hotel including the Garden Court, and buildings located east of the project between New Montgomery and Second Sts. A complete shadow analysis will be included in the EIR for the project.

NOTES - Air Quality/Climate

/1/ These types of emissions are controlled by Regulations 3 and 9, respectively, of the BAAQMD: BAAQMD, Regulation 3 (reactive organic gas emissions) adopted January 4, 1967; and Regulation 9 (architectural coatings) adopted March, 1978. The project contractor would comply with these regulations.

/2/ Donald Ballanti, Certified Consulting Meteorologist, Wind Impact Evaluation for the Proposed 90 New Montgomery Street Building, November, 1981, prepared for Environmental Science Associates, Inc.

/3/ Donald Ballanti, Certified Consulting Meteorologist, letter, January 7, 1982.

7. Utilities and Public Services.
Would the proposed project:

	Yes	Maybe	No	N/A	Disc.
a. Have an effect upon, or result in a need for new or altered, governmental services in any of the following?					
fire protection	___	___	X	___	X
police protection	___	___	X	___	X
schools	___	___	X	___	___
parks or other recreational facilities	___	___	X	___	___
maintenance of public facilities	___	___	X	___	___
power or natural gas	___	___	X	___	X
communications systems	___	___	X	___	___
water	___	___	X	___	___
sewer/storm water drainage	___	___	X	___	X
solid waste collection and disposal	___	___	X	___	X

Fire Protection: The project would increase building floor area on this site by about 400 percent and would increase the number of persons employed on the site from 10 to 520. This would not result in a need for additional Fire Department personnel or equipment./1/ The project would incorporate all emergency response systems stipulated by the Life Safety Code, including fire alarms, an emergency communication system, an emergency power supply and an on-site emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.

Police Protection: The project would increase population and private property on the site, thus increasing the opportunity for crime. The project site is within the Southern Police District with headquarters at 850 Bryant St. The

area is patrolled at all hours by radio-dispatched patrol cars. The Police Department does not expect to require additional police personnel or equipment to serve the project./2/

Power or natural gas: Gas and electricity would be provided by Pacific Gas and Electric. PG&E would anticipate no problems in supplying these utilities for the project./3/

Water: The project site is served by mains located on New Montgomery and Mission Sts. The project would result in a net increase in water use at the site of approximately 16,400 gallons per day. This is a 12-inch main in Mission St. and an 8-inch main in New Montgomery St.; these existing mains have sufficient capacity and pressure to handle the additional demand./4/

Sanitary Sewer: The site is served by 3-foot by 5-foot combined storm and sanitary sewers located on Mission and New Montgomery Sts. The project would generate an estimated additional 16,400 gpd of wastewater per day. The sewer serving the site has sufficient capacity to carry the additional load and no expansion of the present collection and treatment system would be required to serve the project./5/

Solid Waste Disposal: The project would generate about 0.7 tons of solid waste per day. Golden Gate Disposal Company serves the site and anticipates no problems in meeting collection demand./6/ Disposal of municipal solid wastes presently occurs at a landfill site in Mountain View. The contract with this facility expires in October 1983. The City is presently negotiating with other landfill sites to accept San Francisco's solid waste on an interim basis until a solid waste program is implemented in late 1986. The solid waste program would consist of intensified recycling, a resource recovery project generating electricity from the burning of solid wastes, and landfill disposal of bypass and residue wastes from the resource recovery process. The project and cumulative development are not expected to present problems in solid waste disposal upon implementation of the solid waste program./7/

All utilities and public services could serve the project with existing capacity; this topic will not be discussed in the EIR.

NOTES - Utilities and Public Services

/1/ Chief Joseph A. Sullivan, Division of Support Services, San Francisco Fire Department, letter, November 18, 1981.

/2/ Sergeant James Farrell, Division of Planning and Research, San Francisco Police Department, telephone conversation, November 16, 1981.

/3/ Herbert C. Luders, Industrial Power Engineer, Pacific Gas and Electric, telephone conversation, January 6, 1982.

/4/ J.E. Kenck, Manager, San Francisco Water Department, letter, November 25, 1981.

/5/ Nathan Lee, Engineering Associate II, Division of Sewer System Design, San Francisco Clean Water Program, telephone conversation, November 10, 1981.

/6/ Fiore Garbarino, Treasurer, Golden Gate Disposal Company, telephone conversation, November 16, 1981.

/7/ David Gavrich, Assistant Manager for Solid Waste Management, Chief Administrative Office, Special Projects, City of San Francisco, telephone conversation, January 6, 1982.

8. Biology

	Yes	Maybe	No	N/A	Disc.
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?	___	___	X	___	___
b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?	___	___	X	___	___
c. Would the project require removal of mature scenic trees?	___	___	X	___	___

9. Land. (topography, soils, geology) Would the proposed project result in or be subject to:

a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)	X	___	___	___	X
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)	___	X	___	___	X

	Yes	Maybe	No	N/A	Disc.
c. Generation of substantial spoils during site preparation, grading, dredging or fill?	___	X	___	___	X

A review of available geologic data indicates the site is underlain by artificial fill and/or dune sand./1,2/ Artificial fill is generally not considered suitable for support of multi-storied buildings. The site is also mapped as being in an area of major potential subsidence hazard and major liquefaction potential hazard./1/ Groundshaking is expected to be "strong" on the site for a major earthquake of the 1906 type. The project structure would be supported on piles designed and constructed under the supervision of a structural and geotechnical engineer./3/ Project design would comply with all applicable seismic and life safety standards.

The extent of grading and amount of material to be removed has not yet been determined. The existing parking garage has a basement level which extends beneath the sidewalks surrounding the project; a request for continued use of the subsurface parking area would be included with the application for a building permit./4/ Shoring is not expected to affect adjacent structures./3/ The project sponsor would post a surety bond, if required by the San Francisco Department of Public Works, before issuance of a permit to excavate. Such a bond would protect the City against damages to City-owned sidewalks, streets and utilities.

All used material resulting from demolition of the existing structure would be removed from the site. A discussion of grading and foundation design will be included in the project EIR.

NOTES - Land

/1/ URS/John A. Blume and Associates, 1974, San Francisco Seismic Safety Investigation

/2/ Schlocker, Julius, 1974, Geology of the San Francisco North Quadrangle, California (USGS Professional Paper 782)

/3/ Peter Gordon, Architect, Gensler and Associates, letter, November 4, 1981.

/4/ Nelson Wong, Associate Traffic Engineer, Department of Public Works, telephone conversation, January 6, 1982.

10. Water.
Would the proposed project result in:

	Yes	Maybe	No	N/A	Disc.
a. Reduction in the quality of surface water?			X		X
b. Change in runoff or alteration to drainage patterns?			X		X
c. Change in water use?	X				X
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?		X			X

The project would not reduce the quality of surface water, change the amount of runoff from the site, or alter drainage patterns, because the site is now entirely covered with impermeable surfaces. The project would increase water use on the site. Current water use on the site is about 600 gallons per day (gpd). The project would use about 17,000 gpd, increasing water use on the site by about 16,400 gpd.

Until a soils study, which is now being prepared, is completed, it is not known whether dewatering would be required. However, depending on the depth of excavation and the depth of groundwater, similar projects in the site vicinity have required dewatering in the past. See Section C for mitigation measures should dewatering be required. The extent and effects of dewatering will be discussed in the project EIR.

11. Energy/Natural Resources. Would the proposed project result in:

	Yes	Maybe	No	N/A	Disc.
a. Any change in consumption of energy?	X				X
b. Substantial increase in demand on existing energy sources?			X		X
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	X				X

Site development, building construction, and production and transportation of building materials would consume energy derived from non-renewable resources. When occupied, the project would increase energy consumption at the site by providing about 132,600 sq. ft. of new floor space for office and retail activities. The project would contribute to cumulative energy consumption in downtown San Francisco which would result in depletion of non-renewable energy resources. Energy consumption will be discussed in the project EIR.

12. Hazards. Would the proposed project result in:

	Yes	Maybe	No	N/A	Disc.
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	___	___	X	___	___
b. Creation of or exposure to a potential health hazard?	___	___	X	___	___
c. Possible interference with an emergency response plan or emergency evacuation plan?	___	X	___	___	X

The project would incorporate all emergency response systems stipulated by the Life Safety Code, including fire alarms, an emergency communication system, an emergency power supply and an on-site emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.

The project would increase the City's daytime population; employees in the proposed building would contribute to congestion if an emergency evacuation of Downtown were required. The potential impact of the project on the City's emergency response plan will be considered in the project EIR.

13. Cultural. Would the proposed project:

	Yes	Maybe	No	N/A	Disc.
a. Include or affect a historic site, structure or building?	X	___	___	___	X
b. Include or affect a known archaeological resource or an area of archaeological resource potential?	___	___	X	___	___
c. Cause a physical change affecting unique ethnic or cultural values?	___	___	X	___	X

The site is approximately 1,260 feet west of the historic San Francisco Bay shoreline./1/ Archaeological resources of prehistoric age may exist on or near the project site. This topic will be discussed in the project EIR. If any artifacts were to be discovered during site excavation, the project sponsor has agreed to the mitigation measure on p. 27 to provide protection.

The project site is on New Montgomery St. where several architecturally significant buildings are located./2/ Effects of the project on these buildings and the surrounding area will be discussed in the EIR.

NOTES - Cultural

/1/ Schlocker, Julius, 1974, Geology of the San Francisco North Quadrangle, California (USGS Professional Paper 782)

/2/ Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors

C. MITIGATION MEASURES:

	Yes	No	Disc.
Are mitigation measures included in the project?	X		X
Are other mitigation measures available?	X		

Mitigation Measures currently proposed as part of the project include the following:

TRANSPORTATION/CIRCULATION

- Vehicle-activated signals would be installed at both ends of the garage ramp, to prevent head-on conflicts between inbound and outbound vehicles on the one-lane ramp and to warn pedestrians on the sidewalk of the approach of outbound vehicles.

- The curb-to-curb width of Aldrich Alley would be increased by three feet for the length of the site to facilitate access to the enclosed loading dock. This would be done by the project sponsor pursuant to discussion (December 30, 1981) with the Department of Public Works.

NOISE

- The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible.

AIR QUALITY/CLIMATE

- During excavation, unpaved demolition and construction areas would be wetted to hold down dust; if this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced about 50%.

- The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions.

- The general contractor would use water-based or latex paints on all interior drywalls painted, rather than oil-based paints, which emit hydrocarbons while drying. This would reduce hydrocarbons from drying paint by about 60%.

UTILITIES AND PUBLIC SERVICES

- The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.

- The project would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and transport. Separate storage facilities for recyclable waste material would be provided for office use.

LAND (Topography, Soils, Geology)

- A detailed foundation and structural design study would be conducted for the building by a licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.

- The project would have a pile foundation, which would resist hazards such as liquefaction, subsidence, and unstable subsurface conditions (artificial fill). A pile foundation would also provide some measure of protection against seismic forces.

- Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Shoring and sheeting with soldier beams could be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).

WATER

- Should dewatering be necessary, subsidence in surrounding buildings and streets would be monitored by the project sponsor to insure that damage is kept to a minimum. Dewatering would cease should excessive subsidence occur. If any adjacent structures are supported on wet wood piles, a method would be devised to keep the piles moist during construction.

ENERGY

- Wherever possible, office suites would be equipped with individual light switches, fluorescent lights, and other energy saving devices as appropriate to conserve electric energy.

CULTURAL

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the

President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

Other available mitigation measures will be discussed in the EIR.

D. ALTERNATIVES:	Yes	No	Disc.
Were other alternatives considered:	X		X

These alternatives will be discussed in greater detail in the EIR for this project.

1. The Proposed Controls Alternative would be a building designed to meet the criteria outlined in Guiding Downtown Development, published in May 1981 by the Department of City Planning. Height and bulk proposed for the site is 500-S; the proposed FAR would be 12:1. The building would be a 12-story office building with ground level retail similar to the proposed project.

2. The Mission St. Dock Alternative would provide a loading dock with access from and egress to Mission St.

3. The Pass-through Dock Alternative would provide a loading dock with access from Aldrich Alley and egress on Mission St.

4. The Housing Alternative would be a mixed-use project providing on-site housing equal to the demand created by the office space.

5. The No-Parking Alternative would eliminate the 25-space parking garage in the basement level of the proposed project.

6. The Parking Alternative would retain the existing number of parking spaces with office space provided in a structure above the garage.

7. An Historic Alternative would be a structure designed with a height which matches the Call Building and which is sympathetic to its detailed facade.

8. The No-Project Alternative would continue the use of the existing parking garage.

E. MANDATORY FINDINGS OF SIGNIFICANCE:

		Yes	No	Disc.
1.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?	___	X	___
2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	X	___
3.	Does the project have possible environmental effects which are individually limited, but cumulatively considerable?	X	___	X
4.	Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	X	___
5.	Is there a serious public controversy concerning the possible environmental effect of the project?	___	X	___

The project would contribute to the effects of cumulative development on housing demand, transportation systems, air quality, and energy demand.